DVD Player

DVP3800(X)

DVP3800/55
DVP3800/96/98
DVP3800/93
DVP3800/79
DVP3800X/77

Service

Service

Service

First Generation

Service Manual

TABLE OF CONTENTS

Page

Specification.....1-2
Safety Instruction,Warning & Notes.....1-3
Mechanical and Dismantling Instruction.....2-1
Software Upgrades.....3-1
Trouble Shooting 4-1
Wiring Diagram.....5-1
Electrical Diagram and Print-layout.....6-1
Mechanical Exploded View.....7-1
Revision List.....8-1

This service manual is for DVP3800 first generation model, which is different from the second generation DVP3800 model.

For first generation model, the serial number begins with KX 1Axxxxxxxxxx

© Copyright 2011 Philips Consumer Electronics B.V. Eindhoven, The Netherlands
All rights reserved. No part of this publication may be reproduced, stored in aretrieval system or transmitted, in any form or by any means, electronic, mechanical, photocopying, or otherwise without the prior permission of Philips.

CLASS 1 LASER PRODUCT

Published by LLL - 1202 BU AVM Printed in The Netherlands Subject to modification

GB 3142 785 35864

Version 1.4

PHILIPS

Specifications For DVP3800/55

Note

- Specifications are subject to change without notice

DVD region code	Countries
	Latin America

Playable media

- Disc
  - DVD, DVD-Video, VCD, SVCD, Audio CD
  - DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (Maximum number of files: 648)
- File
  - Video: .avi, .divx, .mp4, .xvid
  - Audio: .mp3, .wma
  - Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC
- Composite video output: 1 Vp-p (75 Ohm)
- Component video output: 0.7 Vp-p (75 Ohm)

Audio

- 2-channel analog output
  - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
  - Coaxial
- Sampling frequency:

    - MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
    - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
    - MP3: 8 kbps - 320 kbps
    - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 360 x 42 x 209 (mm)
- Net Weight: 1.44 kg

Power

- Power supply rating: 110 - 240~V, 50/60 Hz
- Power consumption: < 8 W
- Power consumption in standby mode: < 0.3 W

Accessories supplied

- Remote control and one battery
- Audio/Video cables
- AC Power cord
- User Manual
- Power Plug Adapter

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Specifications For DVP3800/96

Note

- Specifications are subject to change without notice

DVD region code	Countries
	Asia Pacific, Taiwan, Korea

Playable media

- Disc
  - DVD, DVD-Video, VCD, SVCD, Audio CD
  - DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (Maximum number of files: 648)
- File
  - Video: .avi, .divx, .mp4, .xvid
  - Audio: .mp3, .wma
  - Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC
- Composite video output: 1 Vp-p (75 ohm)
- Component video output: 0.7 Vp-p (75 ohm)

Audio

- 2-channel analog output
  - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 ohm)
  - Coaxial
- Sampling frequency:
  - MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
  - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
  - MP3: 8 kbps - 320 kbps
  - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 360 x 42 x 209 (mm)
- Net Weight: 1.31 kg

Power

- Power supply rating: 110–240 V~, 50/60 Hz
- Power consumption: < 8 W
- Power consumption in standby mode: < 0.3 W

Accessories supplied

- Remote control and one battery
- Audio/Video cables
- User Manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Specifications For DVP3800/98

Note

- Specifications are subject to change without notice

DVD region code	Countries
	Asia Pacific, Taiwan, Korea

Playable media

- **Disc**

DVD, DVD-Video, VCD, SVCD, Audio CD
DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (Maximum number of files: 648)

- **File**
  Video: .avi, .divx, .mp4, .xvid
  Audio: .mp3, .wma
  Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC
- Composite video output: 1 Vp-p (75 Ohm)
- Component video output: 0.7 Vp-p (75 Ohm)

Audio

- 2-channel analog output
  Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
  - Coaxial
- Sampling frequency:
  MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
  WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
  MP3: 8 kbps - 320 kbps
  WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 360 x 42 x 209 (mm)
- Net Weight: 1.44 kg

Power

- Power supply rating: 110 - 240 V, 50/60 Hz
- Power consumption: < 8 W
- Power consumption in standby mode: < 0.3 W

Accessories supplied

- Remote control and one battery
- Audio/Video cables
- AC Power cord
- User Manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Specifications For DVP3800/93

Note

- Specifications are subject to change without notice

DVD region code	Countries
6	China

Playable media

- Disc
  - DVD, DVD-Video, VCD, SVCD, Audio CD
  - DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (Maximum number of files: 648)
- File
  - Video: .avi, .divx, .mp4, .xvid
  - Audio: .mp3, .wma
  - Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC
- Composite video output: 1 Vp-p (75 ohm)

Audio

- 2-channel analog output
  - Audio Front L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 ohm)
  - Coaxial
- Sampling frequency:
  - MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
  - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
  - MP3: 8 kbps - 320 kbps
  - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 360 x 42 x 209 (mm)
- Net Weight: 1.31 kg

Power

- Power supply rating: 110–240 V~, 50/60 Hz
- Power consumption: < 8 W
- Power consumption in standby mode: < 0.3 W

Accessories supplied

- Remote control and one battery
- Audio/Video cables
- QSG

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

DVP3800/79 Specification

Note

- Specifications are subject to change without notice.

DVD region code	Countries
	Australia, New Zealand

Playable media

- Disc
  - DVD, DVD-Video, VCD, SVCD, Audio CD
  - DVD+R/+RW, DVD-R/-RW, DVD+R/-R DL (Dual Layer), CD-R/-RW (Maximum number of files: 648)
- File
  - Video: .avi, .divx, .mp4, .xvid
  - Audio: .mp3, .wma
  - Picture: .jpg, .jpeg

Video

- Signal system: PAL, NTSC
- Composite video output: 1 Vp-p (75 Ohm)
- Component video output: 0.7 Vp-p (75 Ohm)

Audio

- 2-channel analog output
  - AUDIO OUT L&R : 2 Vrms (47k Ohm)
- Digital output: 0.5 Vp-p (75 Ohm)
  - Coaxial
- Sampling frequency:
  - MP3: 8 kHz, 11 kHz, 12 kHz, 16 kHz, 22 kHz, 24 kHz, 32 kHz, 44.1 kHz, 48 kHz
  - WMA: 44.1 kHz, 48 kHz
- Constant bit rate:
  - MP3: 8 kbps - 320 kbps
  - WMA: 64 kbps - 192 kbps

Main unit

- Dimensions (W x H x D): 360 x 42 x 209 (mm)
- Net Weight: 1.35 kg

Power

- Power supply rating: 230–240 V~, 50 Hz
- Power consumption: < 8 W
- Power consumption in standby mode: < 0.3 W

Accessories supplied

- Remote control and one battery
- Audio/Video cables
- User Manual

Laser specification

- Type: Semiconductor laser InGaAlP (DVD), AlGaAs (CD)
- Wave length: 658 nm (DVD), 790 nm (CD)
- Output Power: 7.0 mW (DVD), 10.0 mW (VCD/CD)
- Beam divergence: 60 degrees

Safety instruction, Warning & Notes

Safety instruction

1. General safety

Safety regulations require that during a repair:

. Connect the unit to the mains via an isolation transformer.

. Replace safety components indicated by the symbol ⚠, only by components identical to the original ones. Any other component substitution (other than original type) may increase risk of fire or electrical shock hazard.

Safety regulations require that after a repair, you must return the unit in its original condition. Pay, in particular, attention to the following points:

. Route the wires/cables correctly, and fix them with the mounted cable clamps.

. Check the insulation of the mains lead for external damage.

. Check the electrical DC resistance between the mains plug and the secondary side:

1) Unplug the mains cord, and connect a wire between the two pins of the mains plug.
2) Set the mains switch the "on" position (keep the mains cord unplug).
3) Measure the resistance value between the mains plug and the front panel, controls, and chassis bottom.
4) Repair or correct unit when the resistance measurement is less than 1MΩ.
5) Verify this, before you return the unit to the customer/user (ref. UL-standard no. 1492).
6) Switch the unit "off", and remove the wire between the two pins of the mains plug.

2.Laser safety

This unit employs a laser. Only qualified service personnel may remove the cover, or attempt to service this device (due to possible eye injury).

Laser device unit

Type : Semiconductor laser GaAlAs

Wavelength : 650nm (DVD)

: 780nm (VCD/CD)

Output power : 7mW (DVD)

: 10mW (DVD /CD)

Beam divergence: 60 degree

Note: Use of controls or adjustments or performance of procedure other than those specified herein, may result in hazardous radiation exposure. Avoid direct exposure to beam.

Warning

1.General

. All ICs and many other semiconductors are susceptible to electrostatic discharges (ESD). Careless handing during repair can reduce life drastically. Make sure that, during repair, you are at the same potential as the mass of the set by a wristband with resistance. Keep components and tools at this same potential. Available ESD protection equipment:

1) Complete kit ESD3 (small tablemat, wristband, connection box, extension cable and earth cable) 4822 310 10671.
2) Wristband tester 4822 344 13999.

. Be careful during measurements in the live voltage section. The primary side of the power supply , including the heat sink, carries live mains voltage when you connect the player to the mains (even when the player is “off”!). It is possible to touch copper tracks and/or components in this unshielded primary area, when you service the player. Service personnel must take precautions to prevent touching this area or components in this area. A “lighting stroke” and a stripe-marked printing on the printed wiring board, indicate the primary side of the power supply.

. Never replace modules, or components, while the unit is “on”.

2. Laser

. The use of optical instruments with this product, will increase eye hazard.

. Only qualified service personnel may remove the cover or attempt to service this device, due to possible eye injury.

. Repair handing should take place as much as possible with a disc loaded inside the player.

. Text below is placed inside the unit, on the laser cover shield:

CAUTION: VISIBLE AND INVISIBLE LASER RADIATION WHEN OPEN, AVOID EXPOSURE TO BEAM.

Notes: Manufactured under licence from Dolby Laboratories. The double-D symbol is trademarks of Dolby Laboratories, Inc. All rights reserved.

Service Hints

CAUTION

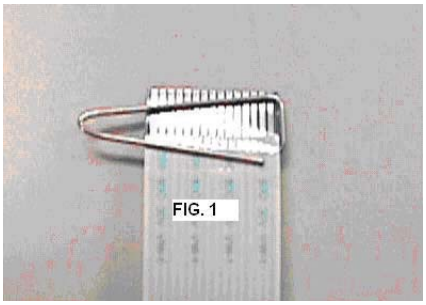
CHARGED CAPACITORS ON THE SERVO BOARD MAY DAMAGE THE DRIVE ELECTRONICS WHEN CONNECTING A NEW DRIVE.THAT'S WHY, BESIDES THE SAFETY MEASURES LIKE

- **SWITCH OFF POWER SUPPLY**
- **ESD PROTECTION**

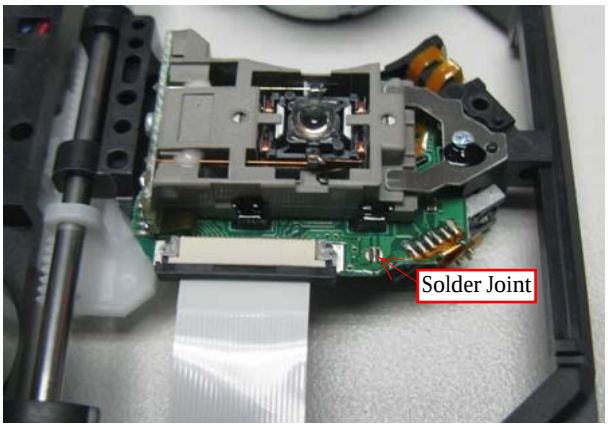
ADDITIONAL ACTIONS MUST BE TAKEN BY THE REPAIR TECHNICIAN.

The following steps have to be done when replacing the defective loader :

1. Dismantling of the loader to access the ESD protection point if necessary.
2. **Solder the ESD protection point*.**
3. Disconnect flexfoil cable from the defective loader.
4. Put a paper clip on the flexfoil to short-circuit the contacts (fig.1)
5. Replace the defective loader with a new loader.
6. Remove paperclip from the flexfoil and connect it to the new loader.
7. Remove solder joint on the ESD protection point.



ATTENTION: The laser diode of this loader is protected against ESD by a solder joint which shortcircuits the laserdiode to ground. For proper functionality of the loader this solder joint must be remove **after** connection loader to the set.



(ESD protection point is accessible from top of loader)

Only applicable for defective loader needed to be sent back to supplier for failure analysis and to support backcharging evidence.
This is also applicable for all partnership workshops.

Notes

Lead-Free requirement for service

INDENTIFICATION:

Regardless of special logo (not always indicated)

One must treat all sets from 1.1.2005 onwards, according next rules.

Important note: In fact also products a little older can also be treated in this way as long as you avoid mixing solder-alloys (leaded/ lead-free). So best to always use SAC305 and the higher temperatures belong to this.

Due to lead-free technology some rules have to be respected by the workshop during a repair:

- Use only lead-free solder alloy Philips SAC305 with order code 0622 149 00106. If lead-free solder-paste is required, please contact the manufacturer of your solder-equipment. In general use of solder-paste within workshops should be avoided because paste is not easy to store and to handle.
- Use only adequate solder tools applicable for lead-free solder alloy. The solder tool must be able
  - To reach at least a solder-temperature of 400°C,
  - To stabilize the adjusted temperature at the solder-tip
  - To exchange solder-tips for different applications.
- Adjust your solder tool so that a temperature around 360°C – 380°C is reached and stabilized at the solder joint. Heating-time of the solder-joint should not exceed ~ 4 sec. Avoid temperatures above 400°C otherwise wear-out of tips will rise drastically and flux-fluid will be destroyed. To avoid wear-out of tips switch off un-used equipment, or reduce heat.
- Mix of lead-free solder alloy / parts with leaded solder alloy / parts is possible but PHILIPS recommends strongly to avoid mixed
  solder alloy types (leaded and lead-free). If one cannot avoid, clean carefully the
  solder-joint from old solder alloy and re-solder with new solder alloy (SAC305).
- Use only original spare-parts listed in the Service-Manuals. Not listed standard-material (commodities) has to be purchased at external companies.
- Special information for BGA-ICs:
  - always use the 12nc-recognizable soldering temperature profile of the specific BGA (for de-soldering always use highest lead-free temperature profile, in case of doubt)
  - lead free BGA-ICs will be delivered in so-called 'dry-packaging' (sealed pack including a silica gel pack) to protect the IC against moisture. After opening, dependent of MSL-level seen on indicator-label in the bag, the BGA-IC possibly still has to be baked dry. This will be communicated via AYS-website.
  Do not re-use BGAs at all.
- For sets produced before 1.1.2005, containing leaded soldering-tin and components, all needed spare-parts will be available till the end of the service-period. For repair of such sets nothing changes.
- On our website:
  www.atyourservice.ce.Philips.com

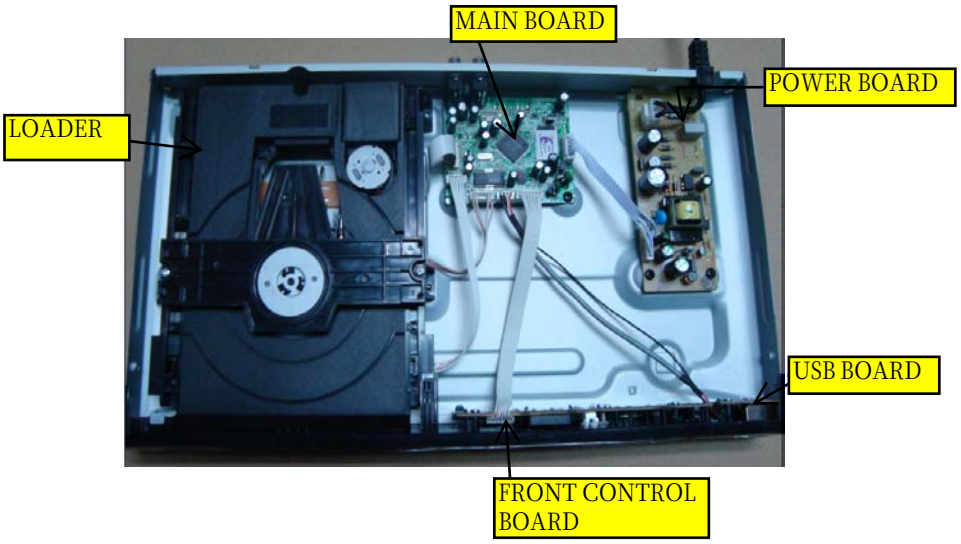
You find more information to:

BGA-de-/soldering (+ baking instructions)
Heating-profiles of BGAs and other ICs used in Philips-sets

You will find this and more technical information within the "magazine", chapter "workshop news".

For additional questions please contact your local repair-helpdesk.

LOCATION OF PCB BOARDS：



VERSION VARIATIONS

Type/Versions / Board in used	DVP3800			
	/55	/93	/96	/98
Main Board	C/M	C/M	C/M	C/M
Front Control Board	C/M	C/M	C/M	C/M
Power Board	C/M	C/M	C/M	C/M
USB Board	M	M	M	M

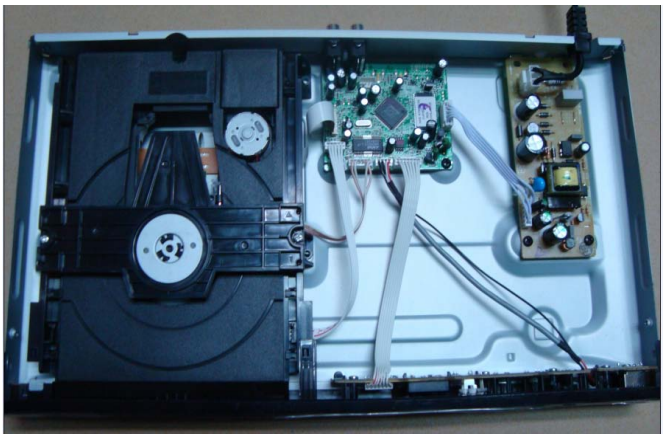
*C:Component Level Repair
*M:Module Level Repair
*X:Used

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

The following guidelines show how to dismantle the player.
Step1: Remove 5 screws around the Top Cover, and then remove the Top Cover (Figure 1).



The sample is DVP3800/93.

Figure 1

Step2: If it is necessary to dismantle Loader or Front Panel, the Front door should be removed first. (Figure 2)
Note: Make sure to operate gently otherwise the guider would be damaged.

Please kindly note that dismantle the front door assembly carefully to avoid damage tray and the front door.

Figure 2

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

Step3: If the tray can't open in normal way, you can make it through the instruction as below (Figure 3).
Note: Make sure to operate gently otherwise the guider would be damaged.

Figure 3

Step4: Dismantling Front Panel, disconnect the connectors (XP7, XP82), need release 4 snaps of Front Panel & 2 snaps of bottom cabinet , then gently pull the Panel out from the set. (Figure 4 - Figure 6)

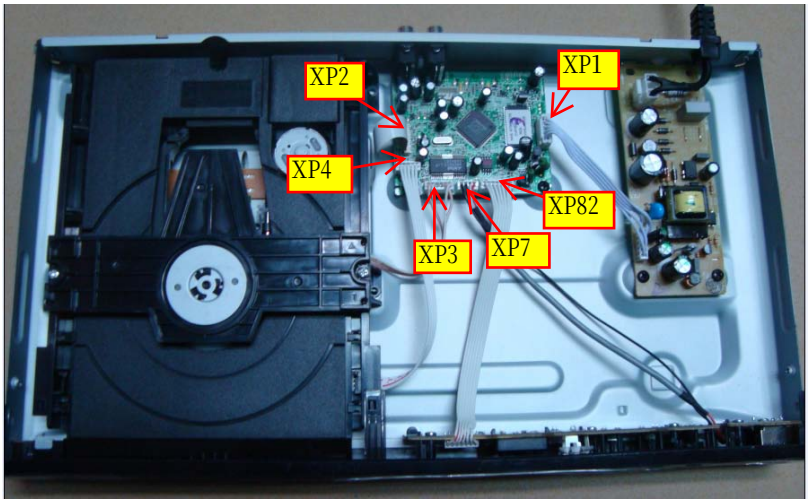


Figure 4

Mechanical and Dismantling Instructions

Dismantling Instruction

Detailed information please refer to the model set.

Step5: Dismantling Loader, disconnect the 3 connectors (XP2, XP3, XP4) aiming in the below figure, and remove 1 screw that connects the loader and the bottom cabinet. (Figure 5)

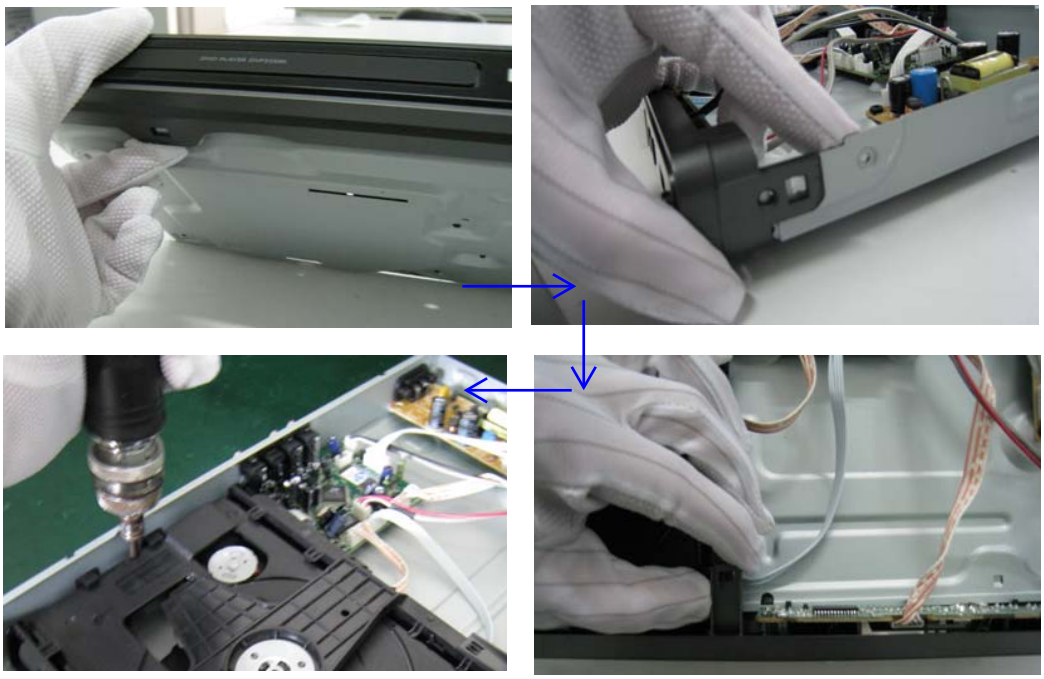


Figure 5

Step6: Dismantling Main Board, first disconnect the connector (XP1), and then remove 3 screws. (Figure 6)

Step7: Remove the 2 screws on Power Board to dismantle the Power Board. (Figure 6)

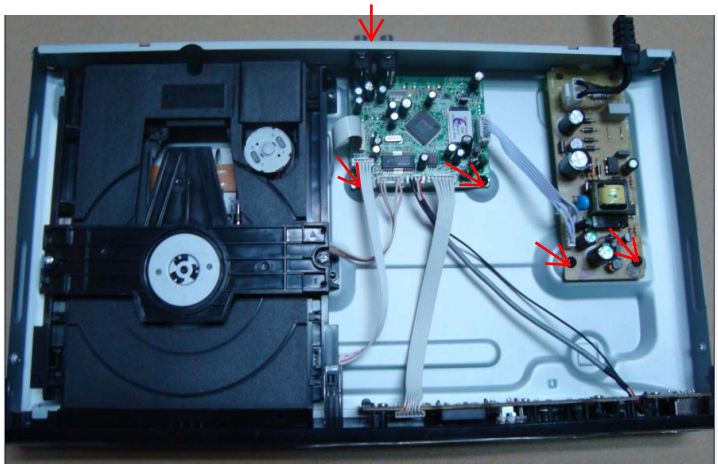


Figure 6

Software upgrade

Preparation to upgrade software

1) Start the CD Burning software and create a new CD project (Data Disc) with the following setting:

Label: DVP3XXX (No need the label name)

File Name: DVPXXXX_XX.BIN

Power on the set and open the tray, then press <option> to check the File Name.

Note: It is required capital letter for the File System name.

2) Burn the data onto a blank CDR

A. Procedure for software upgrade:

1) Power on the set and insert the prepared Upgrade CDR.

2) The set will starts reading disc & response with the following display TV screen:

Upgrade File DETECTED

Upgrade?

Press Play TO START.

3) Press <OK> button to confirm, then screen will display :

Files coping…

UPGRADING…

4) The upgraded tray will automatically open when files coping complete, then take out the disc.

5) About 1 minute later, the trace will automatically close when upgrading complete.

B. Read out the software versions to confirm upgrading

1) Power on the set and press <Setup> button on the remote control.

2) Press <Next><Next><Prev><Prev> button.

The software version and other information are display on the TV screen as follows:

Version XX.XX.XX.XX (Main version)

SUB-VER XX.XX.XX.XX (software version of application software)

8032 XX.XX.XX.XX

Servo XX.XX.XX.XX (software version of servo)

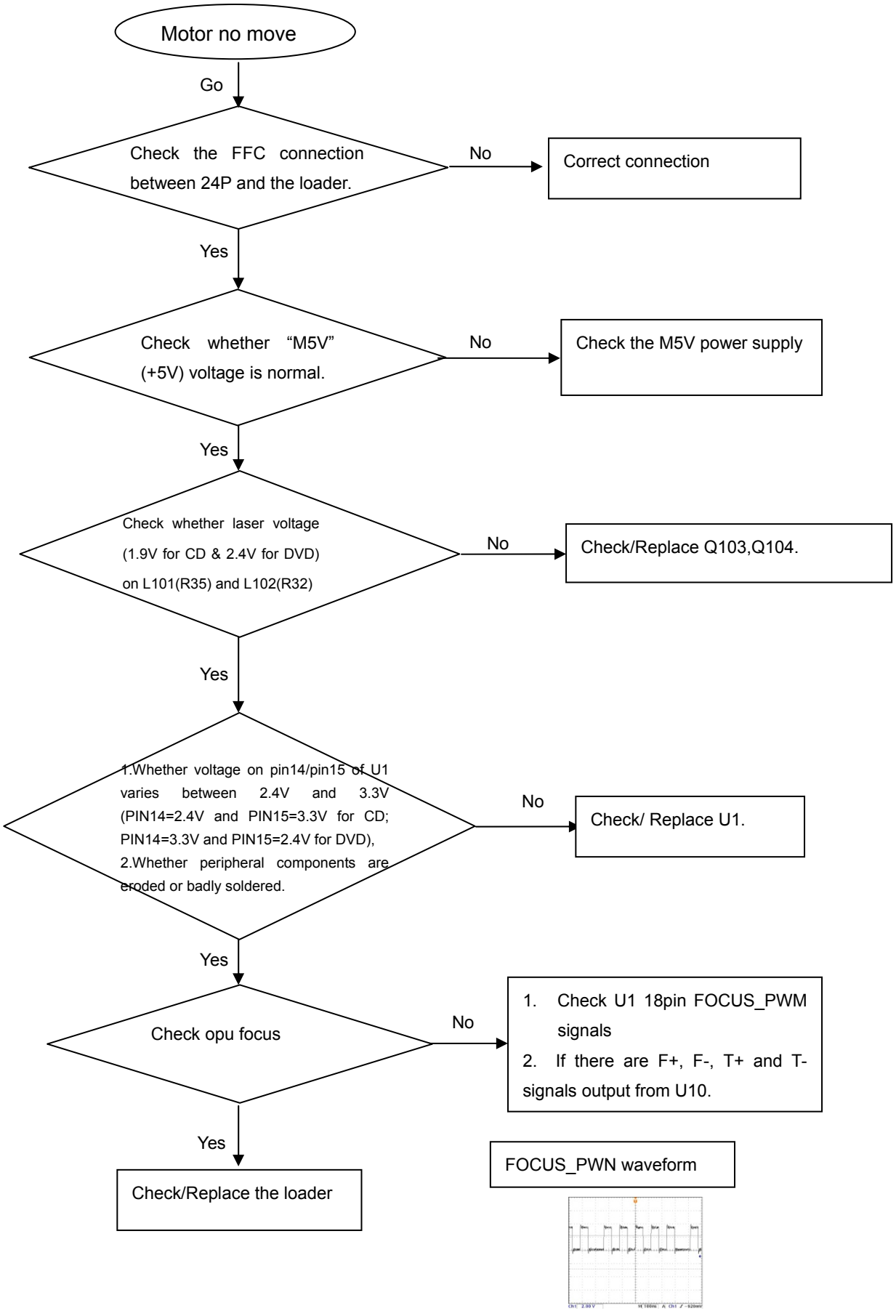
RIS XX.XX.XX.XX

DSP XX.XX.XX.XX

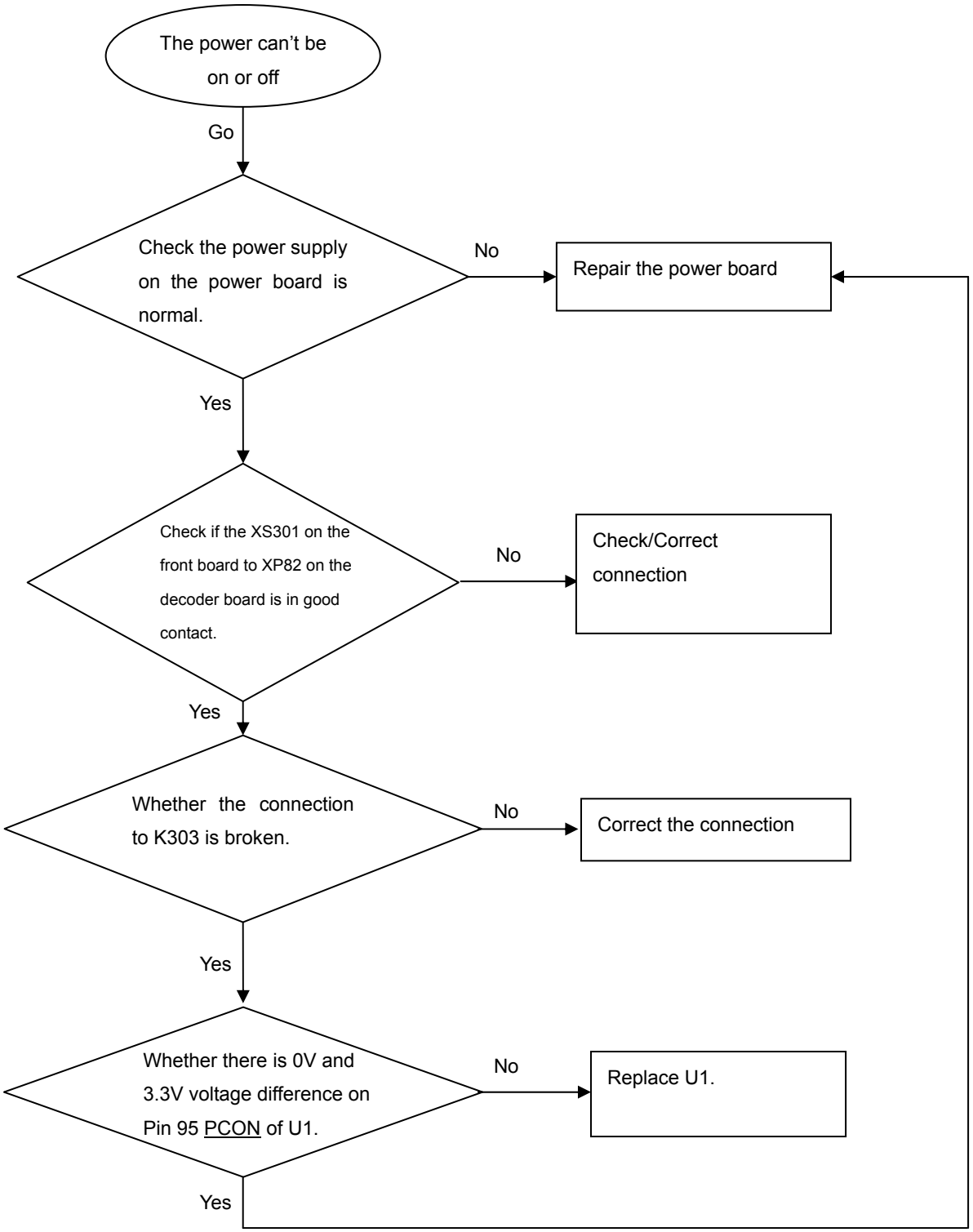
Region Code X

Caution: The set must not be power off during upgrading, Otherwise the Main board will be damaged entirely.

Spindle motor does not move


Motor no move
Go
Check the FFC connection between 24P and the loader.
No
Correct connection
Yes
Check whether “M5V” (+5V) voltage is normal.
No
Check the M5V power supply
Yes
Check whether laser voltage (1.9V for CD & 2.4V for DVD) on L101(R35) and L102(R32)
No
Check/Replace Q103,Q104.
Yes
1.Whether voltage on pin14/pin15 of U1 varies between 2.4V and 3.3V (PIN14=2.4V and PIN15=3.3V for CD; PIN14=3.3V and PIN15=2.4V for DVD), 2.Whether peripheral components are eroded or badly soldered.
No
Check/ Replace U1.
Yes
Check opu focus
No
1. Check U1 18pin FOCUS_PWM signals
2. If there are F+, F-, T+ and T- signals output from U10.
Yes
Check/Replace the loader
FOCUS_PWN waveform

The power can not be on or off


The power can't be on or off
Go
Check the power supply on the power board is normal.
No
Repair the power board
Yes
Check if the XS301 on the front board to XP82 on the decoder board is in good contact.
No
Check/Correct connection
Yes
Whether the connection to K303 is broken.
No
Correct the connection
Yes
Whether there is 0V and 3.3V voltage difference on Pin 95 PCON of U1.
No
Replace U1.
Yes

All output voltages on the power board is 0V or deviated.

All output voltages on the power board is 0V or deviated

Yes

Check whether F501 is blown

Yes

Replace F501

No

Check whether there is 300V on C501 or C502.

No

Replace C501&C502 if D501, D502, D503, D504 are normal.

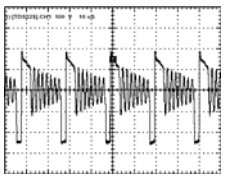
Yes

Check whether 100KHz oscillating signal on Pin4 of U1

No

Check/ replace U1.

U1(PIN 4 - Drain waveform)



Yes

Check if +5V and +12V are short.

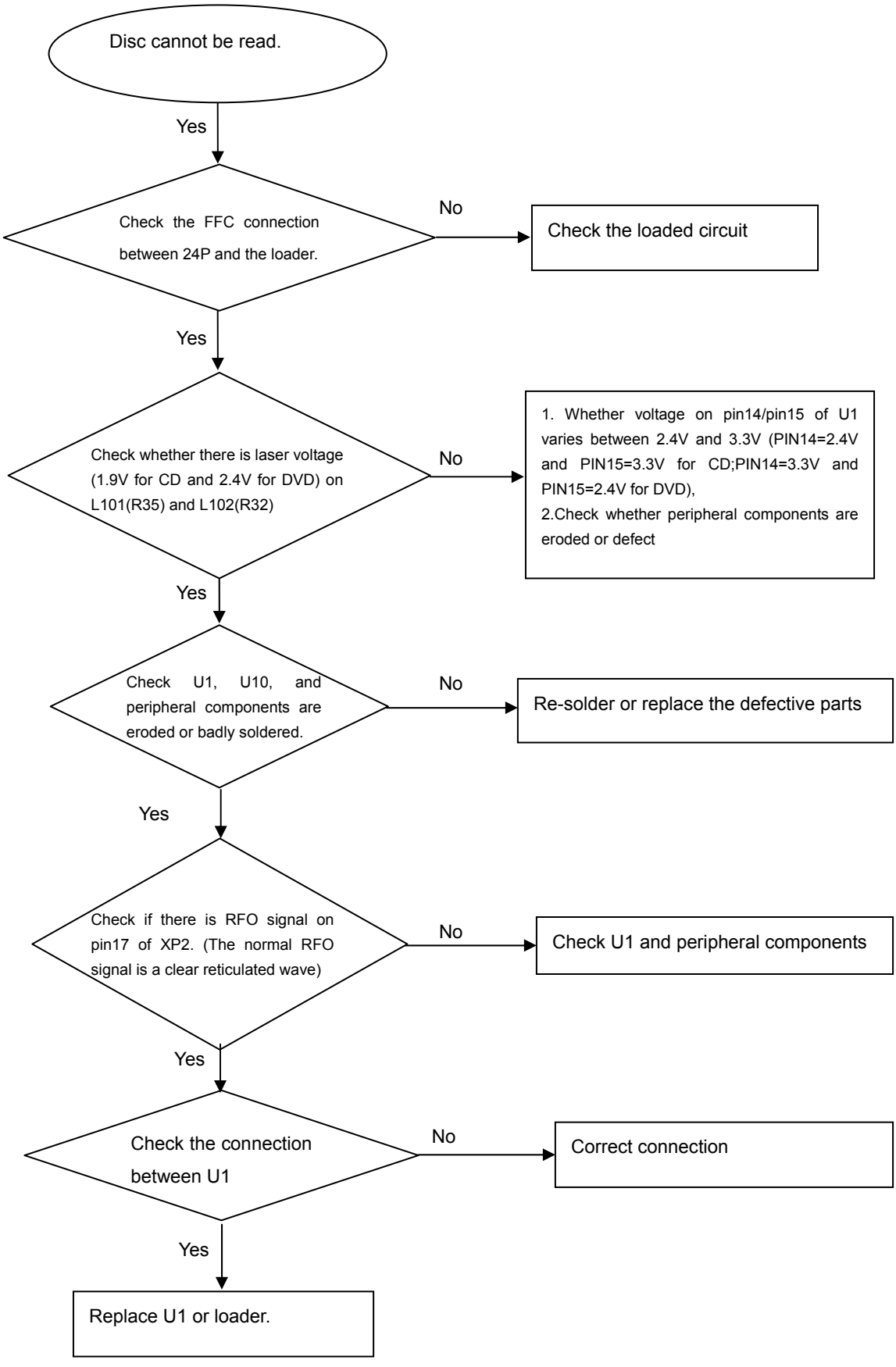
No

Check whether U1 are eroded.

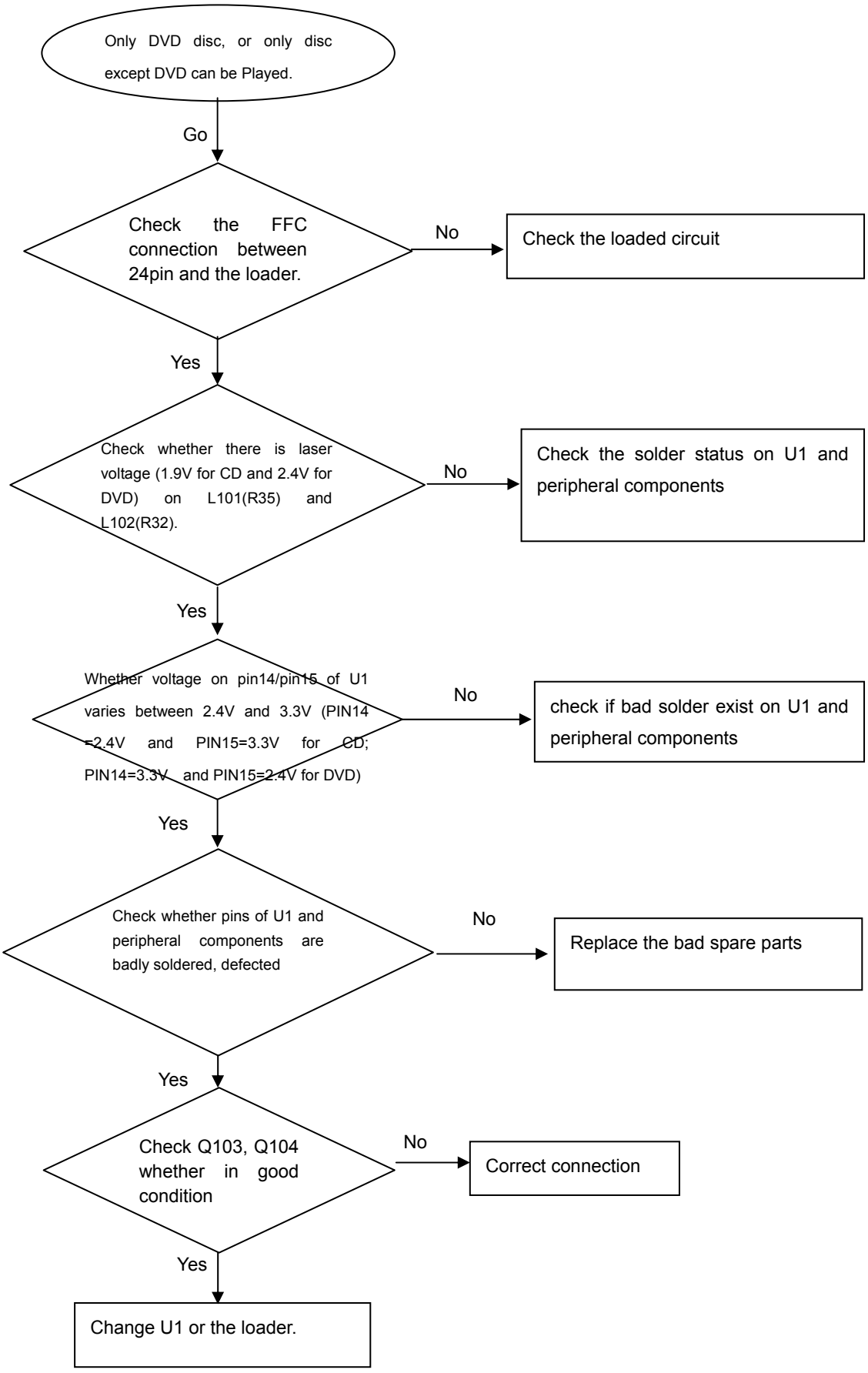
Yes

Check whether the components in the short-circuit voltage are defected or eroded.

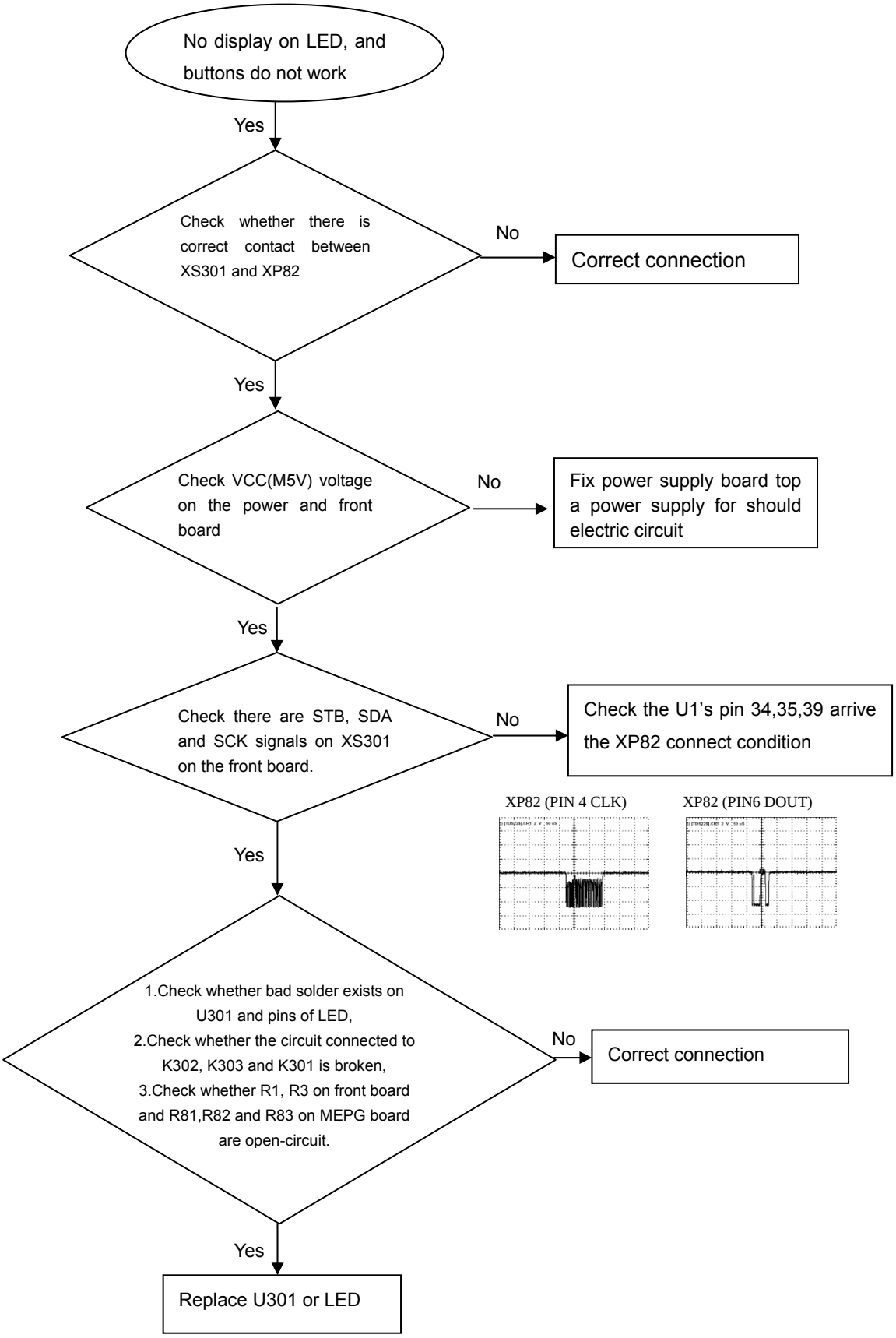
Disc cannot be read.


Disc cannot be read.
Yes
Check the FFC connection between 24P and the loader.
No
Check the loaded circuit
Yes
Check whether there is laser voltage (1.9V for CD and 2.4V for DVD) on L101(R35) and L102(R32)
No
1. Whether voltage on pin14/pin15 of U1 varies between 2.4V and 3.3V (PIN14=2.4V and PIN15=3.3V for CD;PIN14=3.3V and PIN15=2.4V for DVD),
2.Check whether peripheral components are eroded or defect
Yes
Check U1, U10, and peripheral components are eroded or badly soldered.
No
Re-solder or replace the defective parts
Yes
Check if there is RFO signal on pin17 of XP2. (The normal RFO signal is a clear reticulated wave)
No
Check U1 and peripheral components
Yes
Check the connection between U1
No
Correct connection
Yes
Replace U1 or loader.

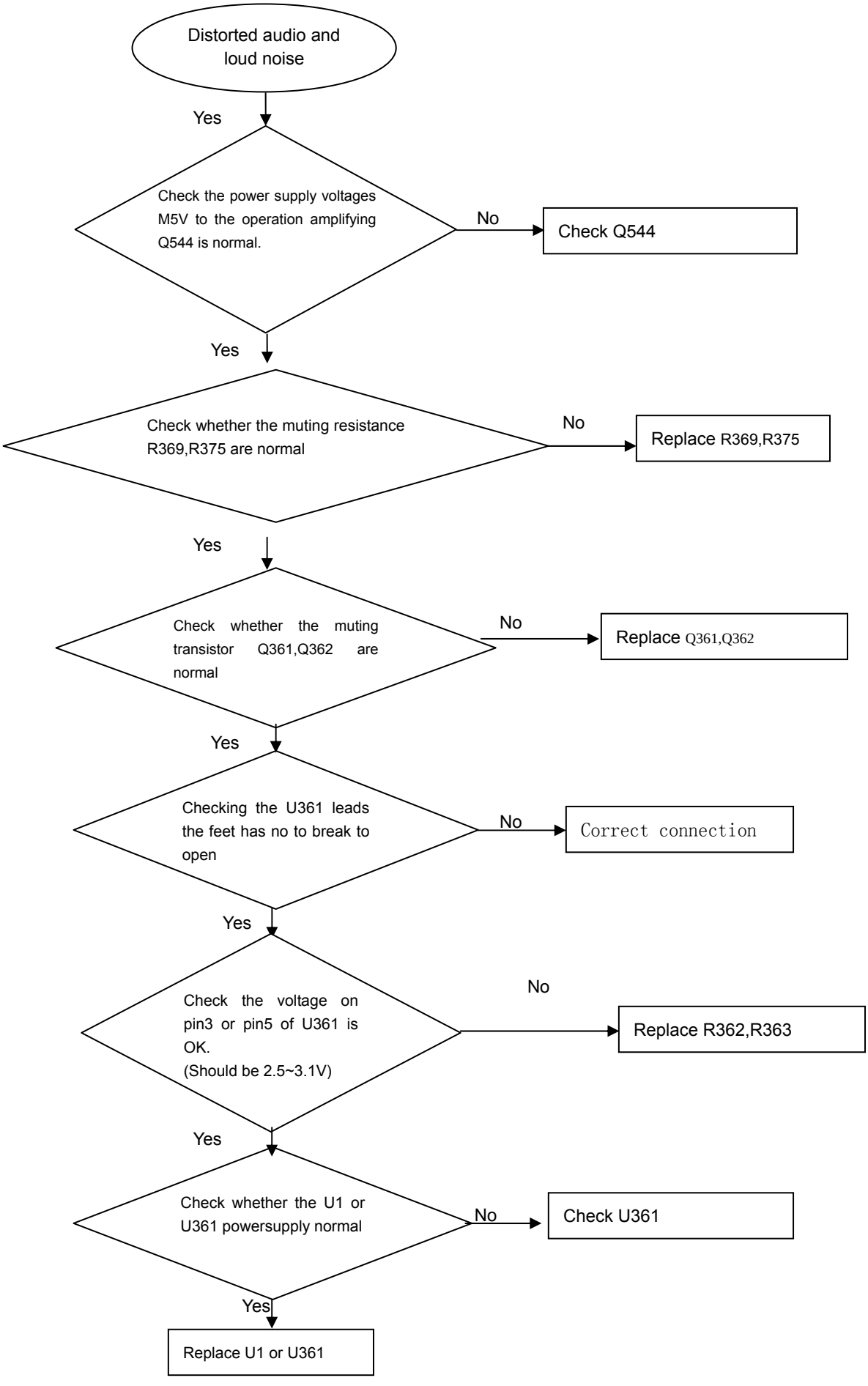
Only DVD disc or only disc except DVD can be played


Only DVD disc, or only disc except DVD can be Played.
Go
Check the FFC connection between 24pin and the loader.
No
Check the loaded circuit
Yes
Check whether there is laser voltage (1.9V for CD and 2.4V for DVD) on L101(R35) and L102(R32).
No
Check the solder status on U1 and peripheral components
Yes
Whether voltage on pin14/pin15 of U1 varies between 2.4V and 3.3V (PIN14 =2.4V and PIN15=3.3V for CD; PIN14=3.3V and PIN15=2.4V for DVD)
No
check if bad solder exist on U1 and peripheral components
Yes
Check whether pins of U1 and peripheral components are badly soldered, defected
No
Replace the bad spare parts
Yes
Check Q103, Q104 whether in good condition
No
Correct connection
Yes
Change U1 or the loader.

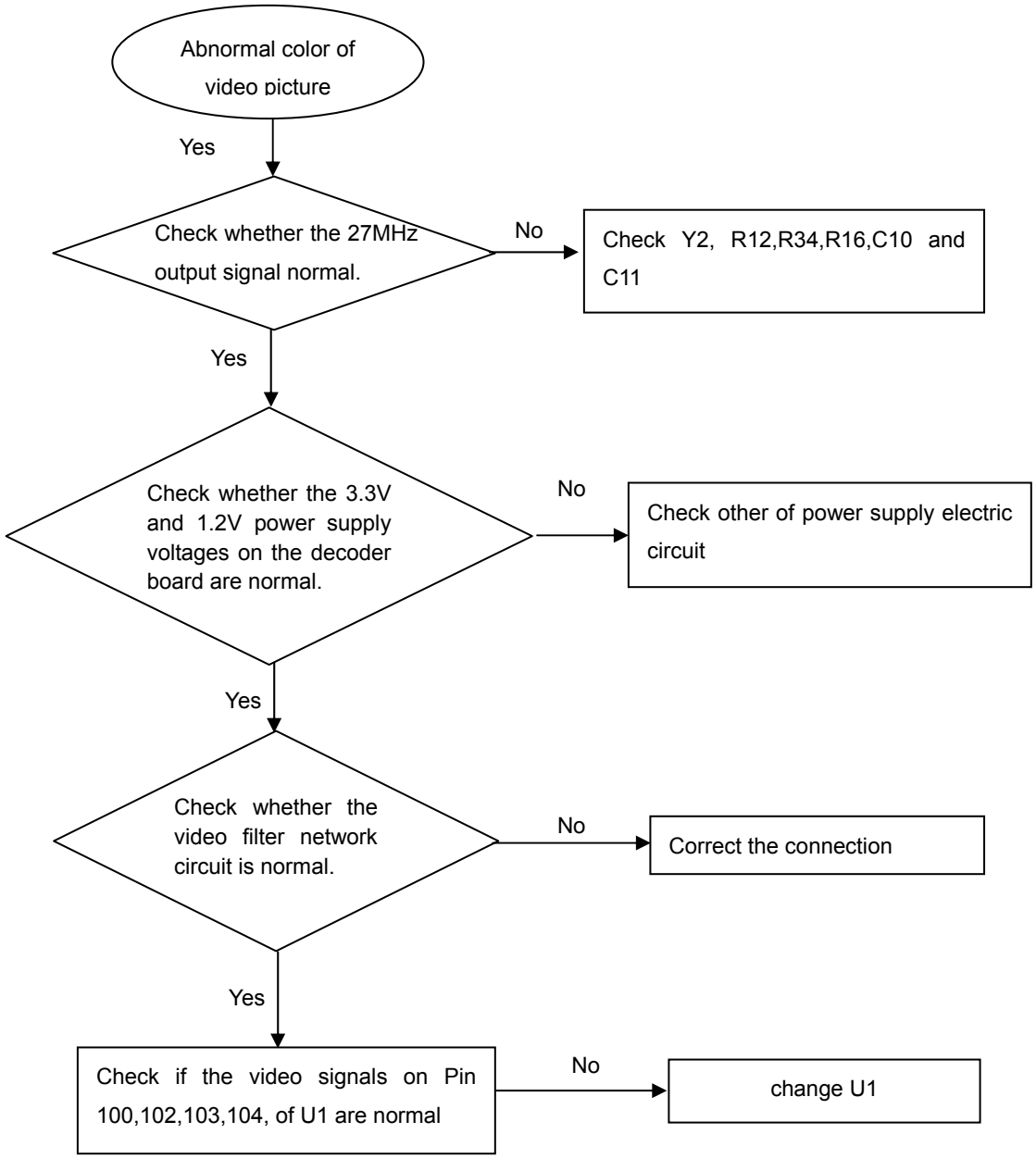
No display on LED, and buttons do not work


No display on LED, and buttons do not work
Yes
Check whether there is correct contact between XS301 and XP82
No
Correct connection
Yes
Check VCC(M5V) voltage on the power and front board
No
Fix power supply board top a power supply for should electric circuit
Yes
Check there are STB, SDA and SCK signals on XS301 on the front board.
No
Check the U1's pin 34,35,39 arrive the XP82 connect condition
XP82 (PIN 4 CLK)
XP82 (PIN6 DOUT)
Yes
1.Check whether bad solder exists on U301 and pins of LED,
2.Check whether the circuit connected to K302, K303 and K301 is broken,
3.Check whether R1, R3 on front board and R81,R82 and R83 on MEPG board are open-circuit.
No
Correct connection
Yes
Replace U301 or LED

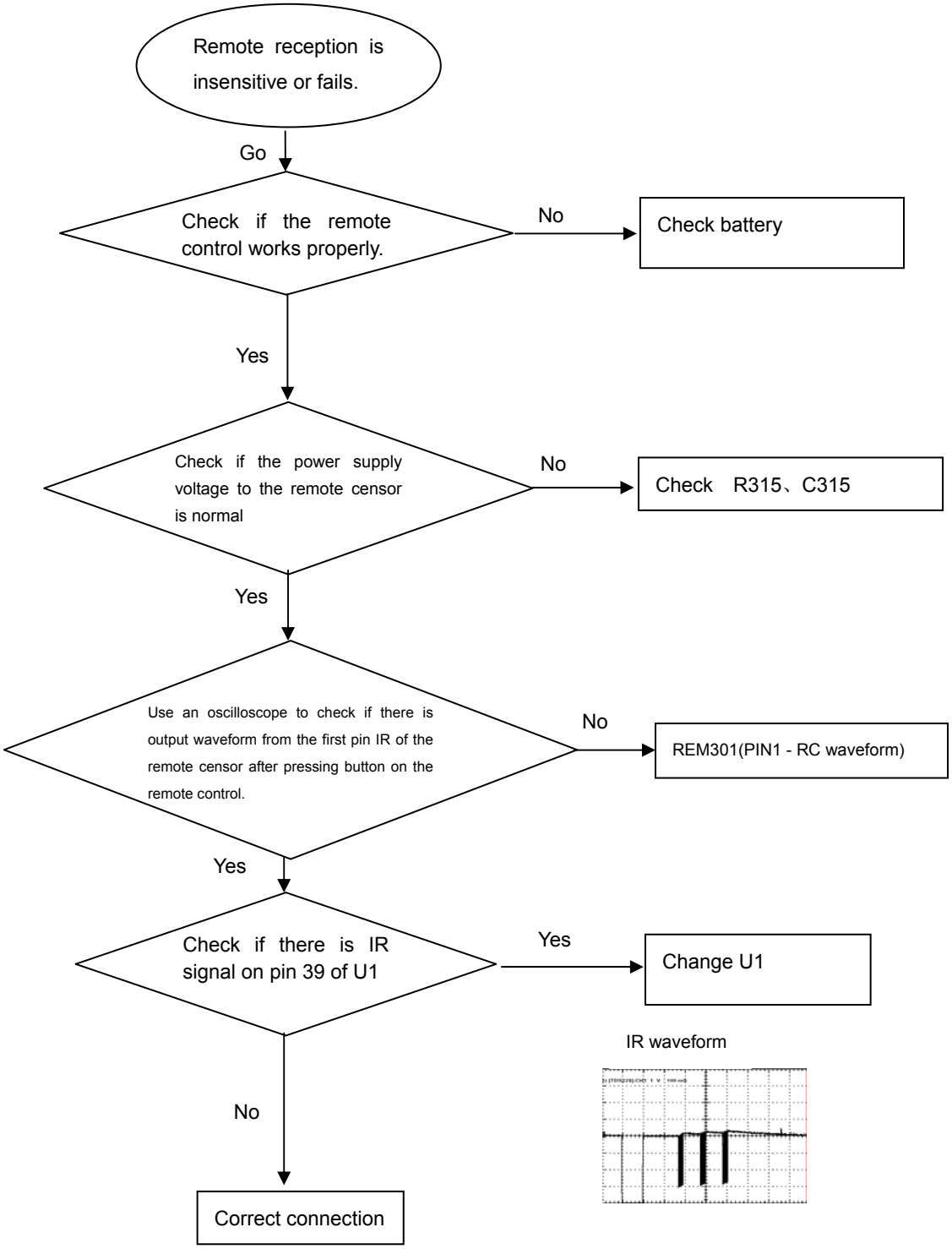
Distorted audio and loud noise



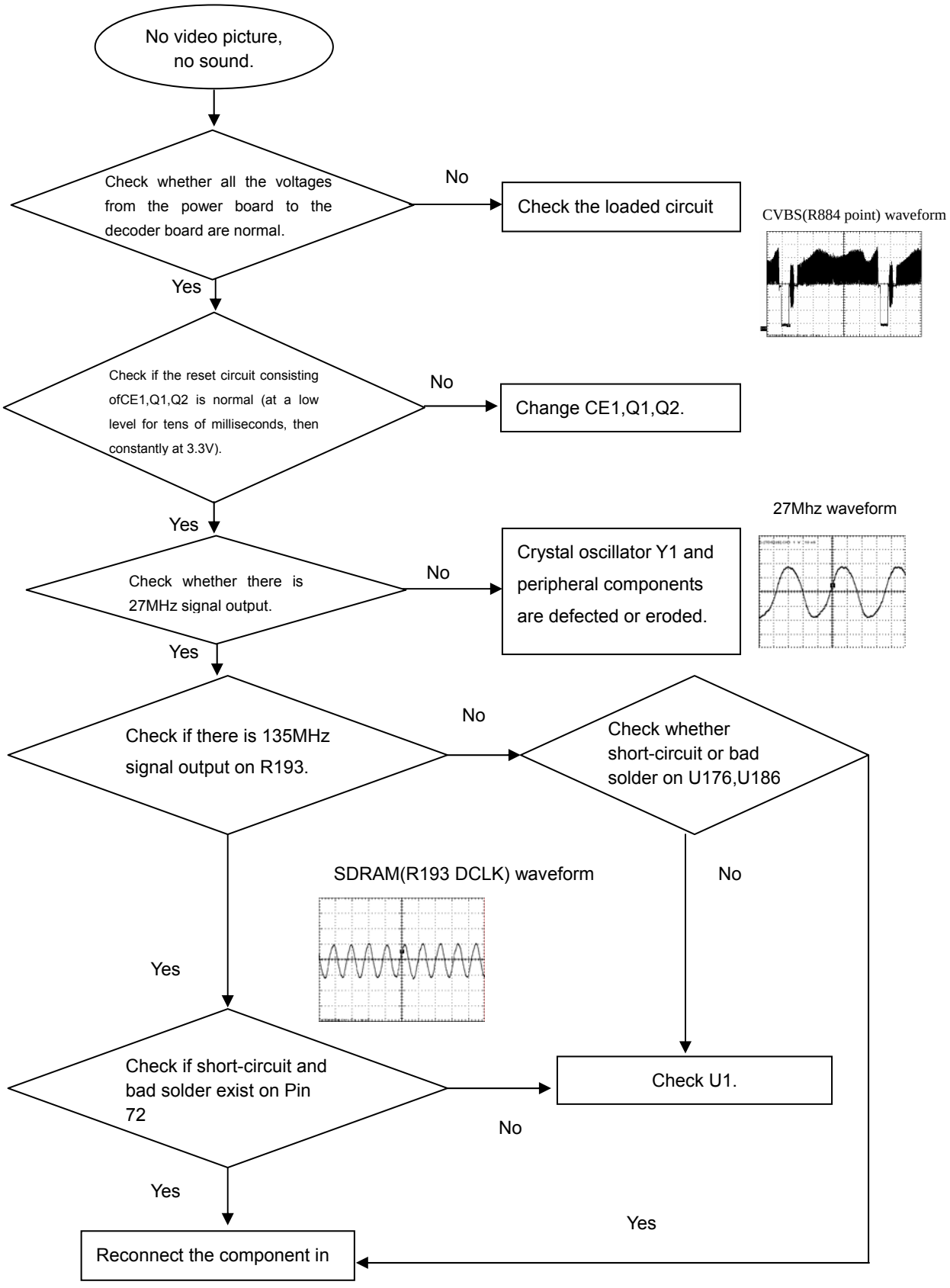
Abnormal color of video picture


Abnormal color of video picture
Yes
Check whether the 27MHz output signal normal.
No
Check Y2, R12,R34,R16,C10 and C11
Yes
Check whether the 3.3V and 1.2V power supply voltages on the decoder board are normal.
No
Check other of power supply electric circuit
Yes
Check whether the video filter network circuit is normal.
No
Correct the connection
Yes
Check if the video signals on Pin 100,102,103,104, of U1 are normal
No
change U1

Remote reception is insensitive or fails.

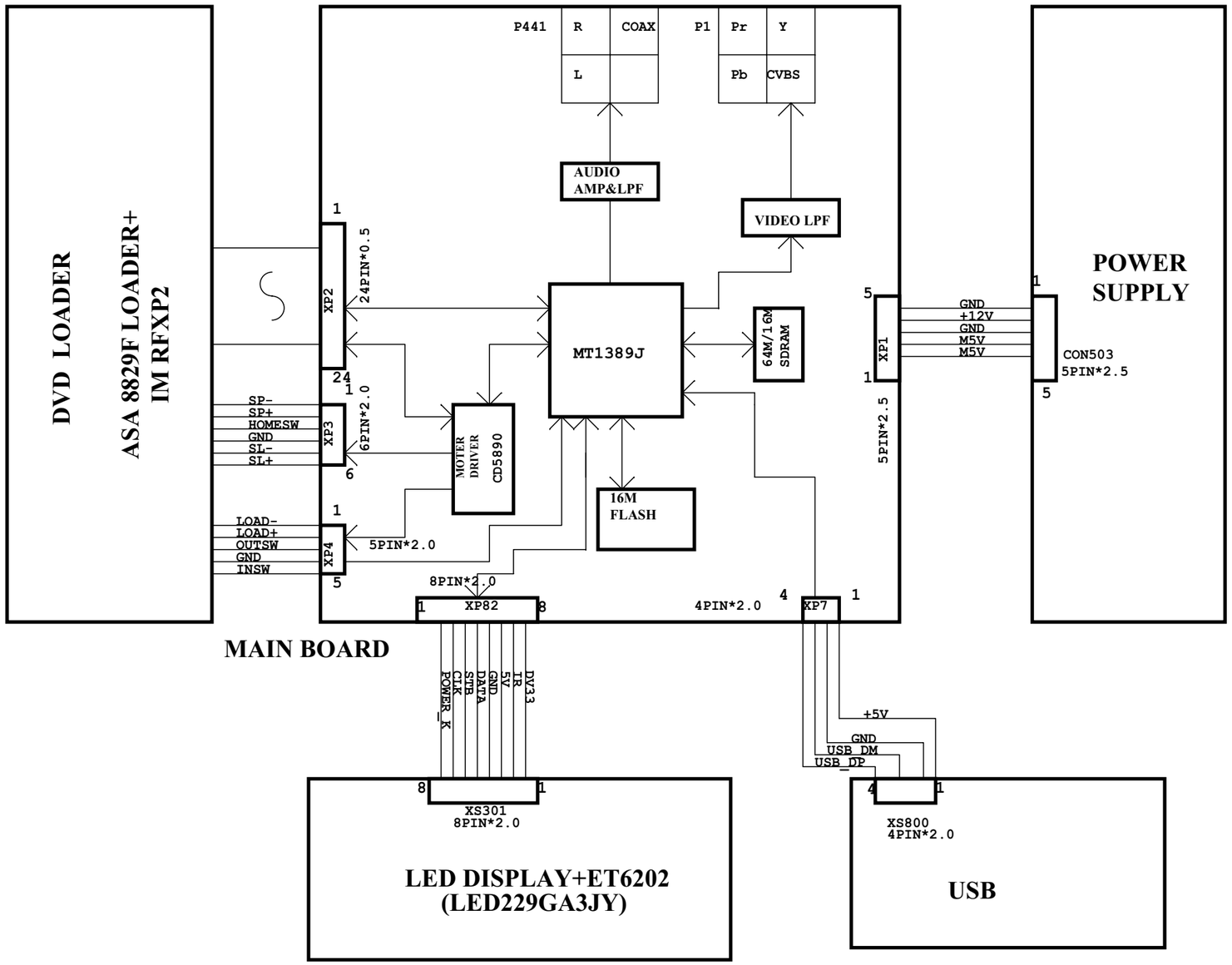

Remote reception is insensitive or fails.
Go
Check if the remote control works properly.
No
Check battery
Yes
Check if the power supply voltage to the remote censor is normal
No
Check R315、C315
Yes
Use an oscilloscope to check if there is output waveform from the first pin IR of the remote censor after pressing button on the remote control.
No
REM301(PIN1 - RC waveform)
Yes
Check if there is IR signal on pin 39 of U1
Yes
Change U1
IR waveform
No
Correct connection

No video picture, no sound.


No video picture, no sound.
Check whether all the voltages from the power board to the decoder board are normal.
No
Check the loaded circuit
CVBS(R884 point) waveform
Yes
Check if the reset circuit consisting ofCE1,Q1,Q2 is normal (at a low level for tens of milliseconds, then constantly at 3.3V).
No
Change CE1,Q1,Q2.
Yes
27Mhz waveform
Check whether there is 27MHz signal output.
No
Crystal oscillator Y1 and peripheral components are defected or eroded.
Yes
Check if there is 135MHz signal output on R193.
No
Check whether short-circuit or bad solder on U176,U186
SDRAM(R193 DCLK) waveform
No
Yes
Check if short-circuit and bad solder exist on Pin 72
Check U1.
No
Yes
Yes
Reconnect the component in

5-1

DVP3800 BLOCK/WIRING DIAGRAM



6-1

Main Board Circuit Diagram: Power / MOTOR DRIVER

TO POWER BOARD

XP1
5pin/2.5mm

+5V
GND
GND

50mA

C752 0.1uF/NC
C751 0.1uF/NC

M5V
R751 NM/0
C753 1uF
Q753 SS8550D
R753 2.2K
5V
+12V

R752 NM/0
Q751 SS8550D
R755 22K
R757 4.7K
R758 4.7K

USB_CON

+12V: +12V(+-10%)

+5V: +5V(+-2.5%)

PCON:
L: STBY
H: Working

PCON
R756 1K
Q752 BT3904
R754 4.7K

M5V
R761 1.8/2W
Inor=465mA
Istandby:125mA

R762 10/1W
Inor=150mA
Istandby:8mA
Inor=315mA

TR_B1
Q761 SS8550D
DV33
TR_B2
Q762 SS8550D
DV12

R765 20K 1%
REG01
R766 12K 1%
C761 0.1uF
CE761 220uF16V
REG02
R767 0
C762 0.1uF
CE762 100uF16V
GND
GND

Vref = 1.235~1.27V

modify

IR
VSDA
VSTB
VSCK
POWER_K

PCON
USB_CON
RFV33
DV33

DV33
R84 4.7K
R86 4.7K
M5V
R1 0R
5V
R7 0R/NC
C85 0.1uF/NC
C84 0.1uF/NC
C83 100pF

TO FRONT PANEL

XP82
8PIN/2.0mm

IR
DV33
R80 100R
VSDA
VSTB
VSCK
R81 220R
R82 220R
R83 220R
POWER_K
R88 1k
C80 100pF/NC
C81 100pF/NC
C86 0.1uF
C82 100pF/NC

01UOPUIFC-101

24PIN/0.5mm
XP2

LD-DVD
5V_HFM
MDI
LD-CD
VR_DVD
VR_CD
E
5V_OPU
VREF_OPU
F
B
A
RFO
LDSW
D
C
T-
T+
F+
F-

GND
GND

R111 0R
C103 0.1uF/25V
C104 NM/1000pF
L101 10 UH/NC
L102 10 UH/NC
C101 1000pF
C102 1000pF
R32 0

Q103 3CG9012M
LDO_DVD
R106 4.7
CE101 47uF/16V
RFV33
R107 4.7
Q104 3CG9012M
CE102 47uF/16V
LDO_CD

M5V
R117 1K 1%
5V
R120 3K
CE104 100uF/16V
C105 0.1uF/25V
L100 2.2R
C100 0.1uF/25V
CE100 100uF/16V/NC
C106 0.1uF/25V
R112 10K

U10
AM5890

T-
T+
SL+
SL-
VOTK+
VOTK-
VOLD+
VOLD-
VCC2
NC
VCTL
G2
GND
VINLD
NC
TRB2
VINTK
BIAS
MUTE
FMSO
RESET_A
TR_B2
TRSO
M_BIAS
STBY
VOFC+
VOFC-
VOSL-
VOSL+
VOTR+
VOTR-
VCC
G1
REV
FWD
REGO1
VINSL+
REGO2
TRB1
VINFC
F+
F-
SP-
SP+
LOAD+
LOAD-
TROPEN
TRCLOSE
REG01
DMSO
REG02
TR_B1
FOSO
R113 10K

M5V
DV33
R114 10K
LIMIT
C107 0.1uF/25V
R115 1K
SP-A
SP+
GND
SL-
SL+
XP3
6PIN/2.0mm

DV33
R134 10K
R116 10K
LOAD-
LOAD+
TROUT
TRIN
R118 1K
R119 1K
C110 0.1uF/25V
C108 100pF/NC
C109 100pF/NC
XP4
5PIN/2.0mm

TROPEN
TRCLOSE
FMSO
TRSO
DMSO
FOSO
M_BIAS
STBY
TRIN
TROUT
LIMIT
SP-
SP-A

MOTOR I/F

A
B
C
D
E
F
RFO
VREF_OPU
LDO_CD
LDO_DVD
LDSW

OPU I/F

RESET_A

SP-
SP-A
TROPEN
TRCLOSE
FMSO
TRSO
DMSO
FOSO
M_BIAS
STBY
TRIN
TROUT
LIMIT

MOTOR I/F

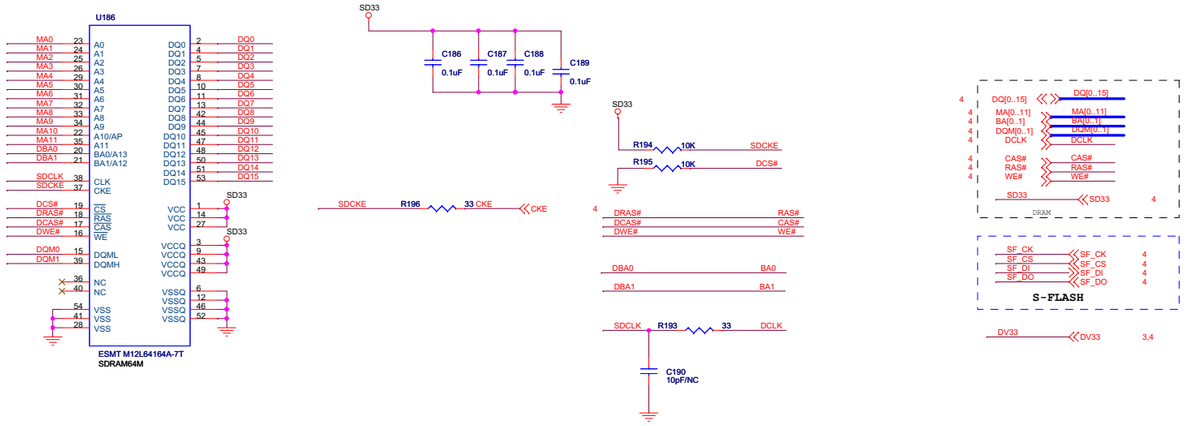
A
B
C
D
E
F
RFO
VREF_OPU
LDO_CD
LDO_DVD
LDSW

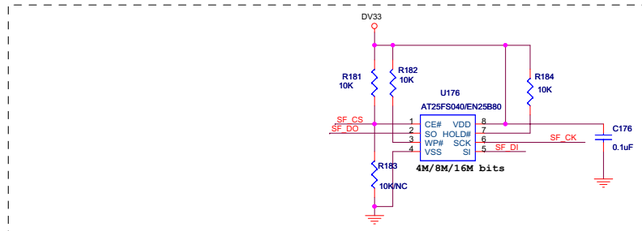
MDI
VR_DVD
VR_CD

OPU I/F

6-2

Main Board Circuit Diagram:SDRAM/FLASH





01U0FLASH-101

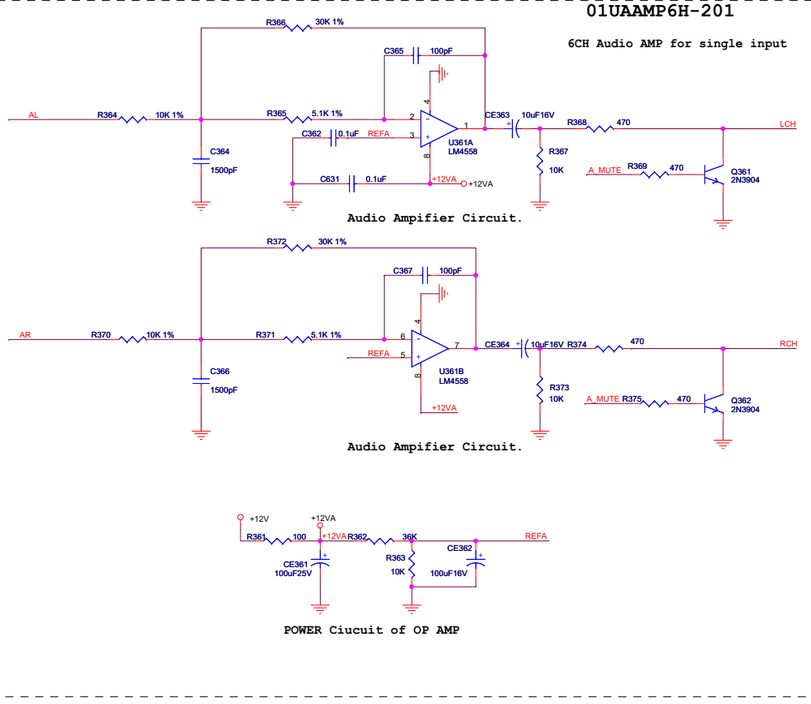
Note 2:IF use R183,Must take over R181.Default use R183(10K),and R181 Open.

6-3

Main Board Circuit Diagram:AUDIO I/F

01UAAMP6H-201

6CH Audio AMP for single input

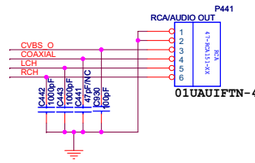


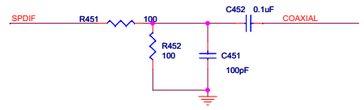
Audio Ampifier Circuit.

Audio Ampifier Circuit.

POWER Ciucuit of OP AMP

01UAUIFTN-501

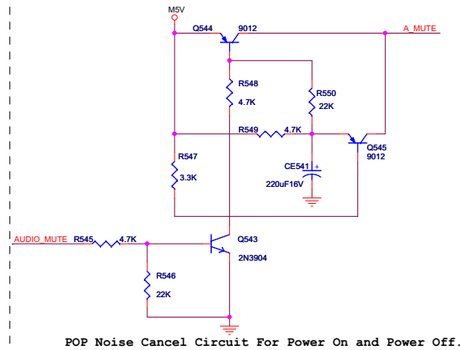




Output Interface Circiut for SPDIF Coaxial.

01USPDIFT-101

01UMAMPMU-201

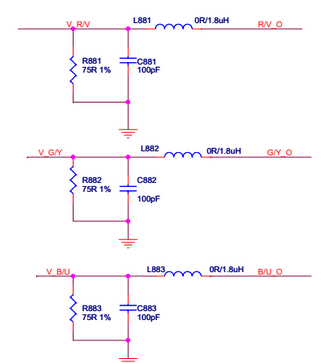


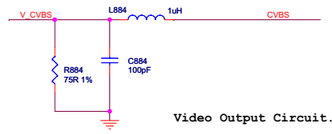
POP Noise Cancel Circuit For Power On and Power Off.

6-4

Main Board Circuit Diagram:VIDEO I/F

01UVIDEOO-101



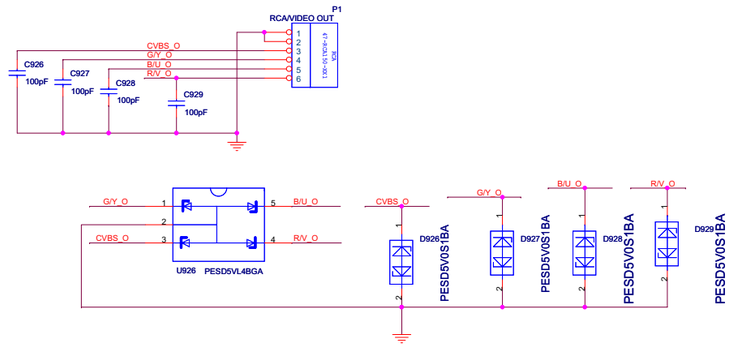


Video Output Circuit.

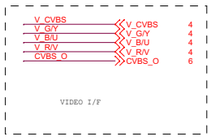
Note:Only CE61(470uF/6.3V) use for India stroke.unless other use R230(0 OHM)

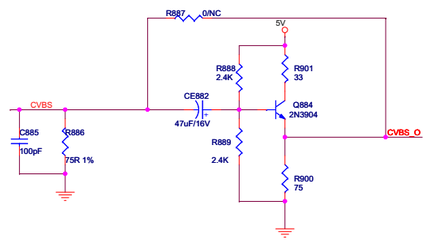
01UVIDEOT-101

VIDEO OUTPUT TERMINAL.



NOTE1:D926,D927,D928,D929 only for 94/55/77/78(ie.India/Latin America /Argentine/Brazil) stroke,Other Stroke use U926



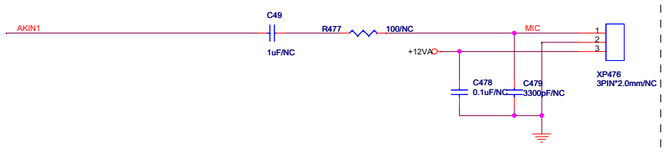


6-5

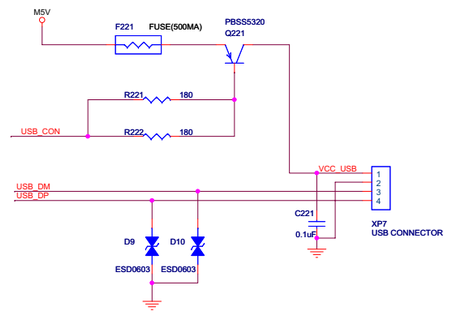
Main Board Circuit Diagram:KOK & USB I/F

01UKOKIFT-201

Karaoke input interface with MPEG IC,for ZORAN platforms.

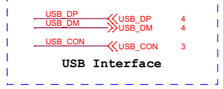


01UKUSBIFT-101



USB HOST Interface and Control Circuit.

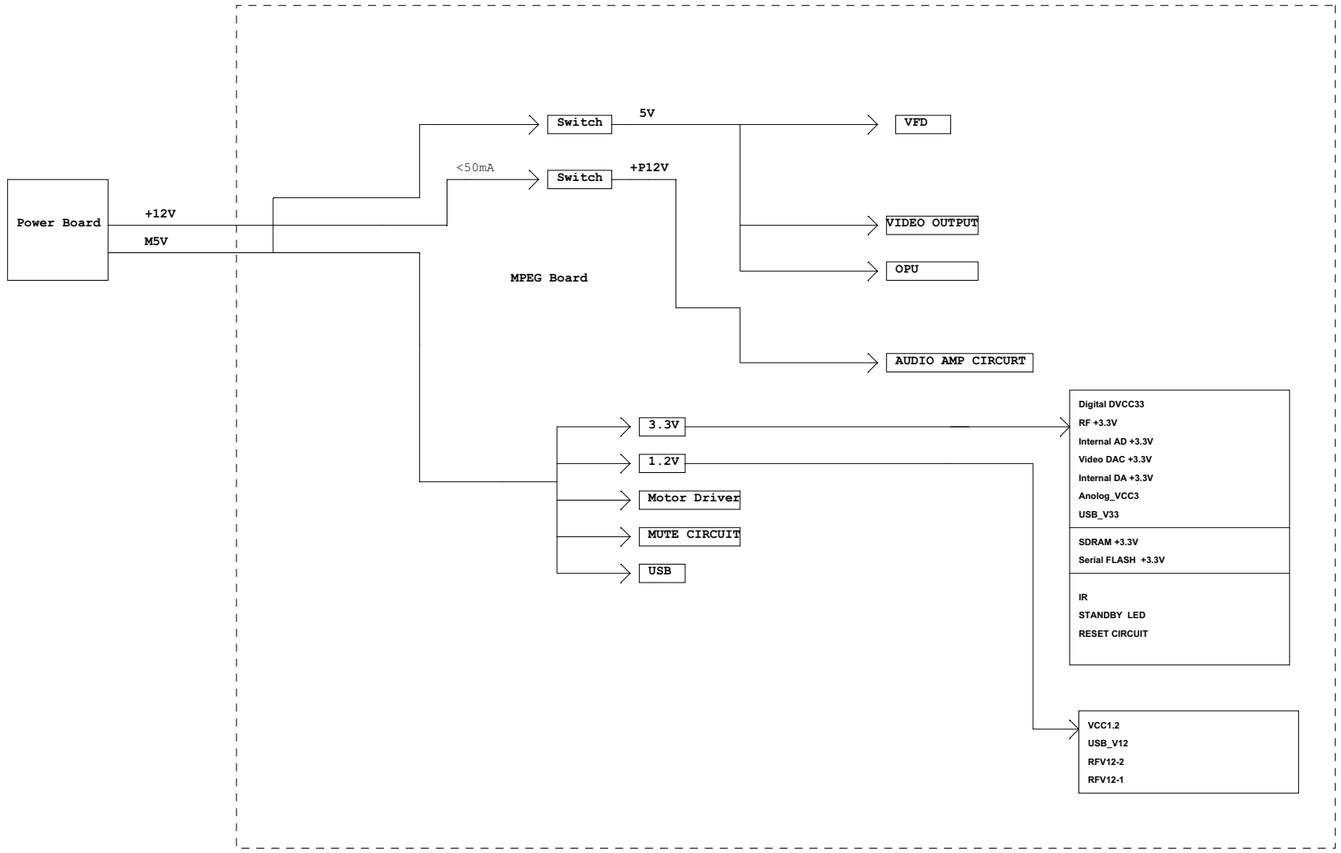
Note:Q221 use PBSS5320(BJT teansistor) after Year 2009.



USB Interface

6-6

Main Board Circuit Diagram:POWER FLOW



6-7

Main Board Circuit Diagram:MT1389J LQFP 128

Unit Name	RESET CIRCUIT	
Unit Number	A02	01UURESET-101
Reference	1-9	
Description	2N3904(89L/R/M/ZR)	
Date&VER	2009-06-18	

Unit Name	Crystal circuit	
Unit Number	A18	01UCRYSTA-501
Reference	10-19	
Description	27MHz Crystal(MTK)	
Date&VER	2009-06-18	

Crystal

Put these circuits as closer as possible to MPEG DECODER.

FOR MTK PLATFORMS.

Digital

SDRAM +3.3V

RF +3.3V

Internal AD +3.3V

Video DAC +3.3V

Internal DA +3.3V

RF Reference

MT1389J
No EPAD
LQFP 128
V1.0

Rvrt close to IC PIN

OFF-PAGE CONNECTION

DRAM I/F

S-FLASH

VIDEO I/F

AUDIO I/F

USB I/F

SERVO I/F

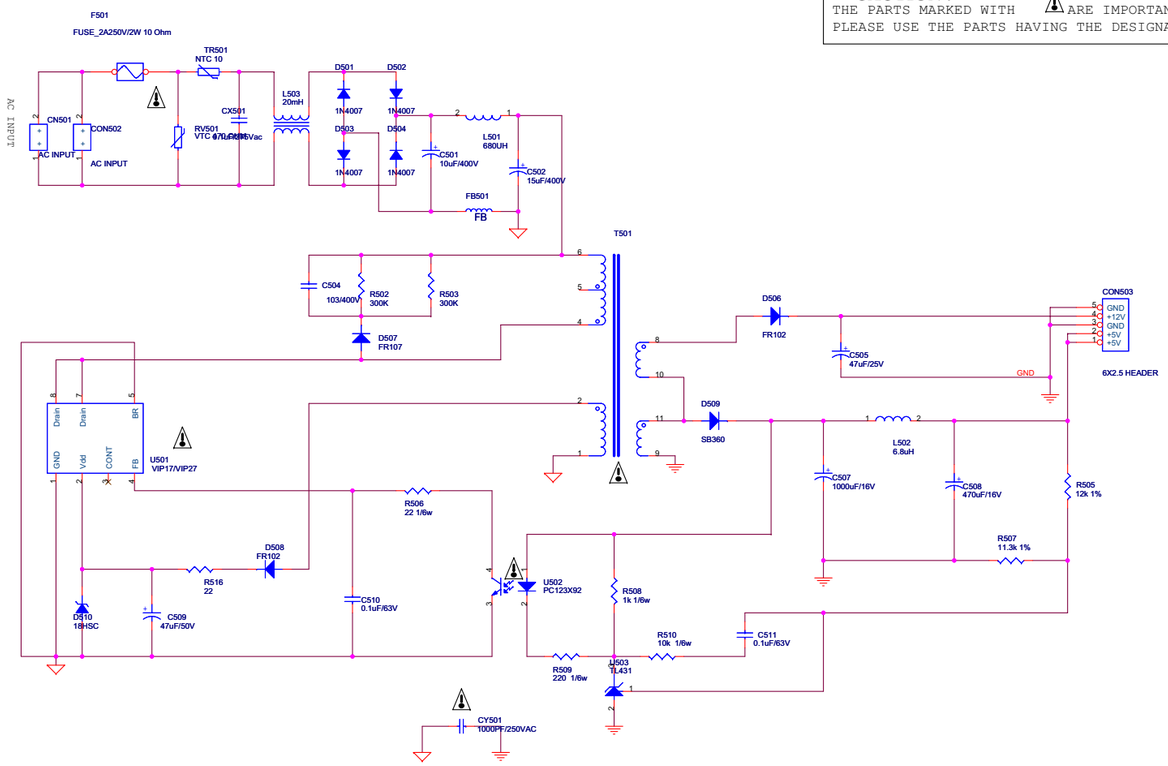
OPU I/F

POWER

6-8

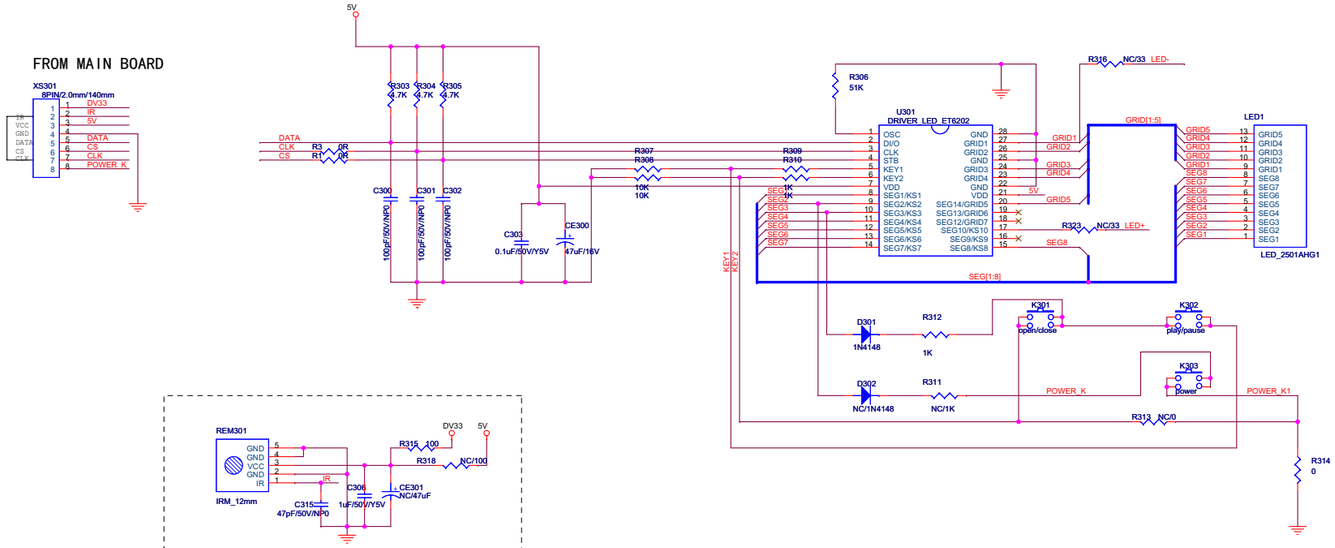
Power Supply Board Circuit Diagram:

*** CAUTION :**
THE PARTS MARKED WITH ⚠ ARE IMPORTANT PARTS ON THE SAFETY.
PLEASE USE THE PARTS HAVING THE DESIGNATED PARTS NUMBER WITHOUT FAIL.



6-9

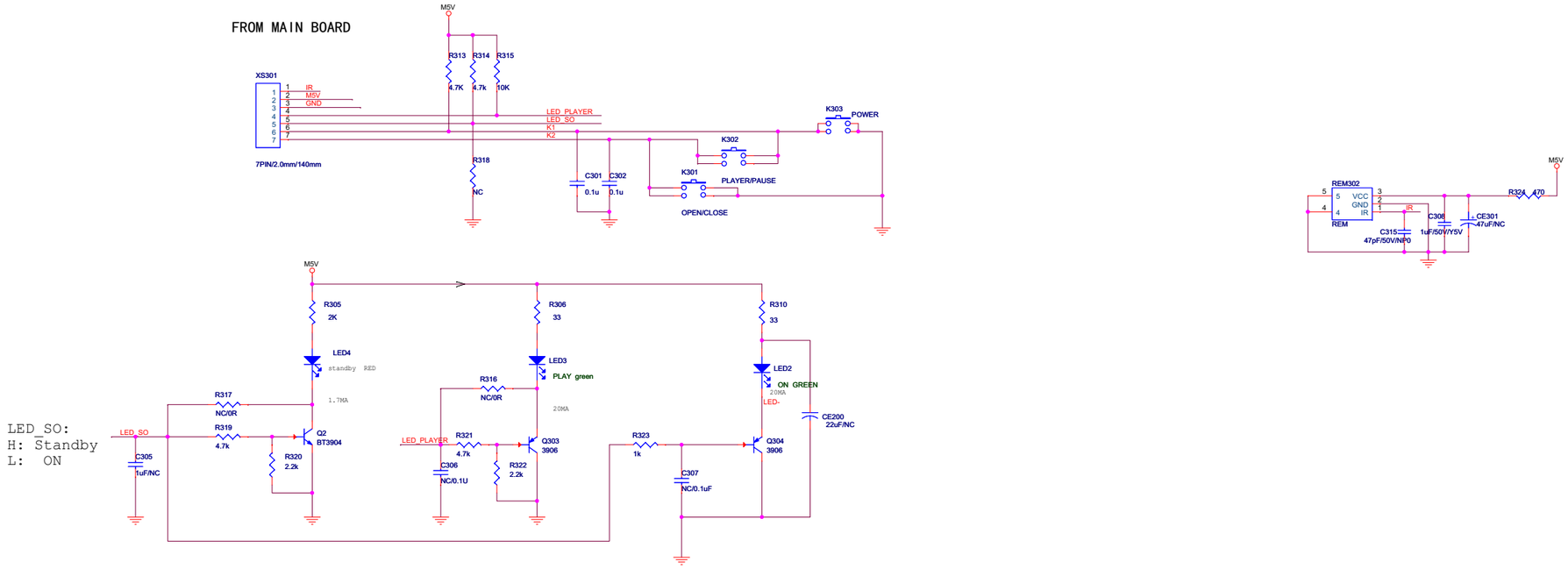
Front Karaoke board Circuit Diagram:



power	Q1	R317	R319	R321	R322	R323	R316	R313
0.3W	Y	Y	Y	Y	Y	N	N	N
1W	N	N	N	N	N	Y	Y	Y

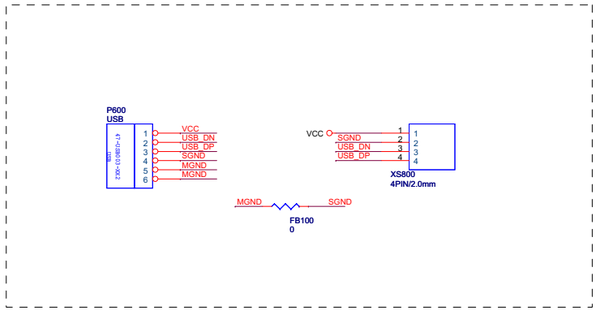
6-10

Front Control Board Circuit Diagram:



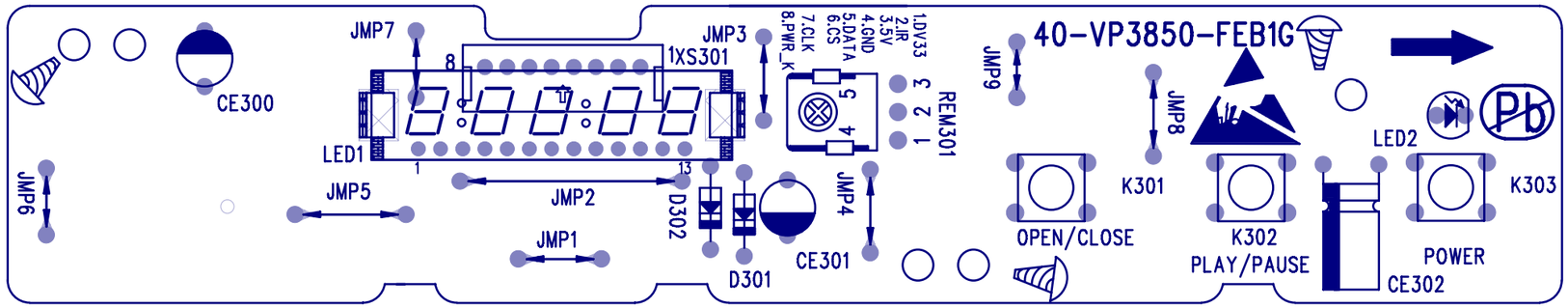
6-11

USB Circuit Diagram:

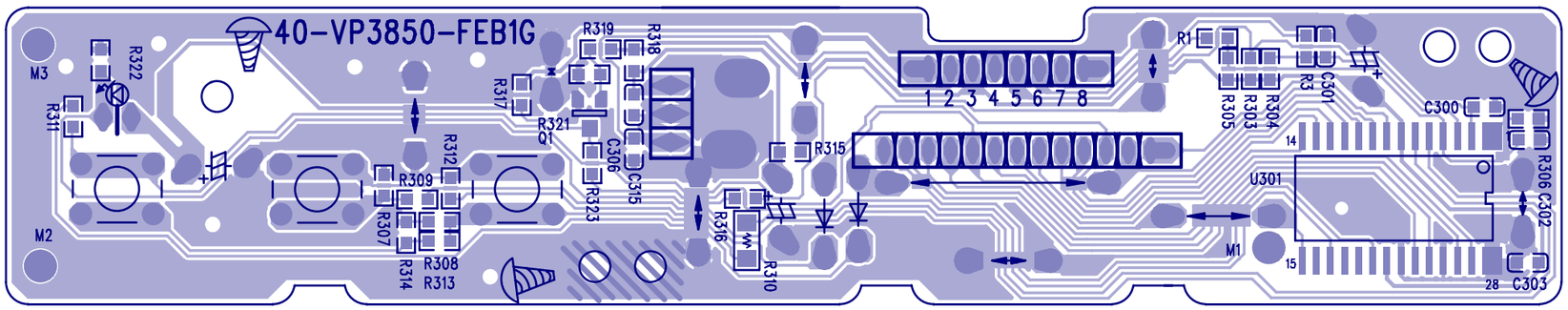


6-12

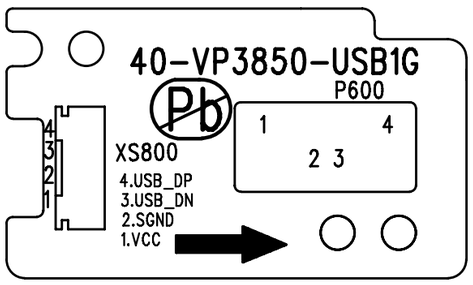
Front Control Board Print-layout (top side):



Front Control Board Print-layout (bottom side):

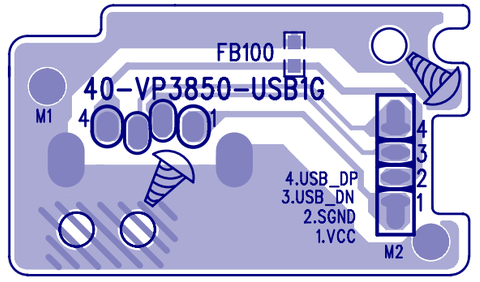


USB Board Print-layout (top side):



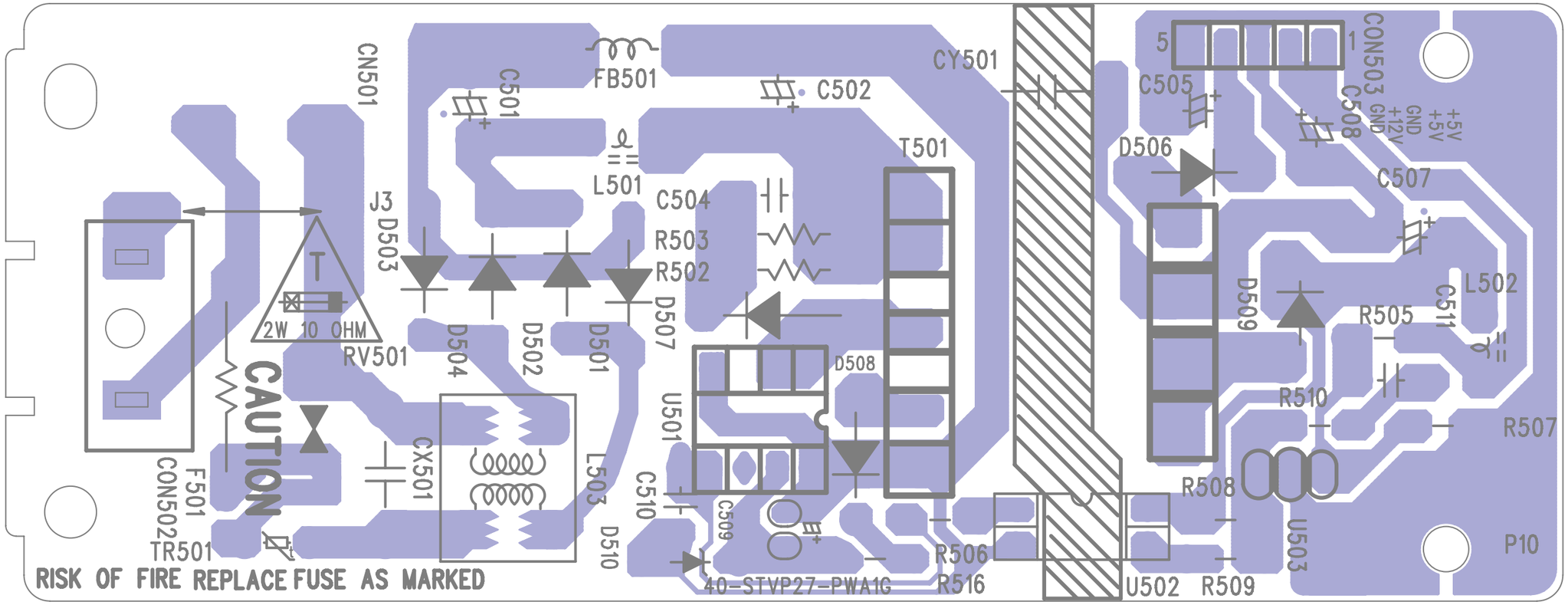
6-13

USB Board Print-layout (bottom side):



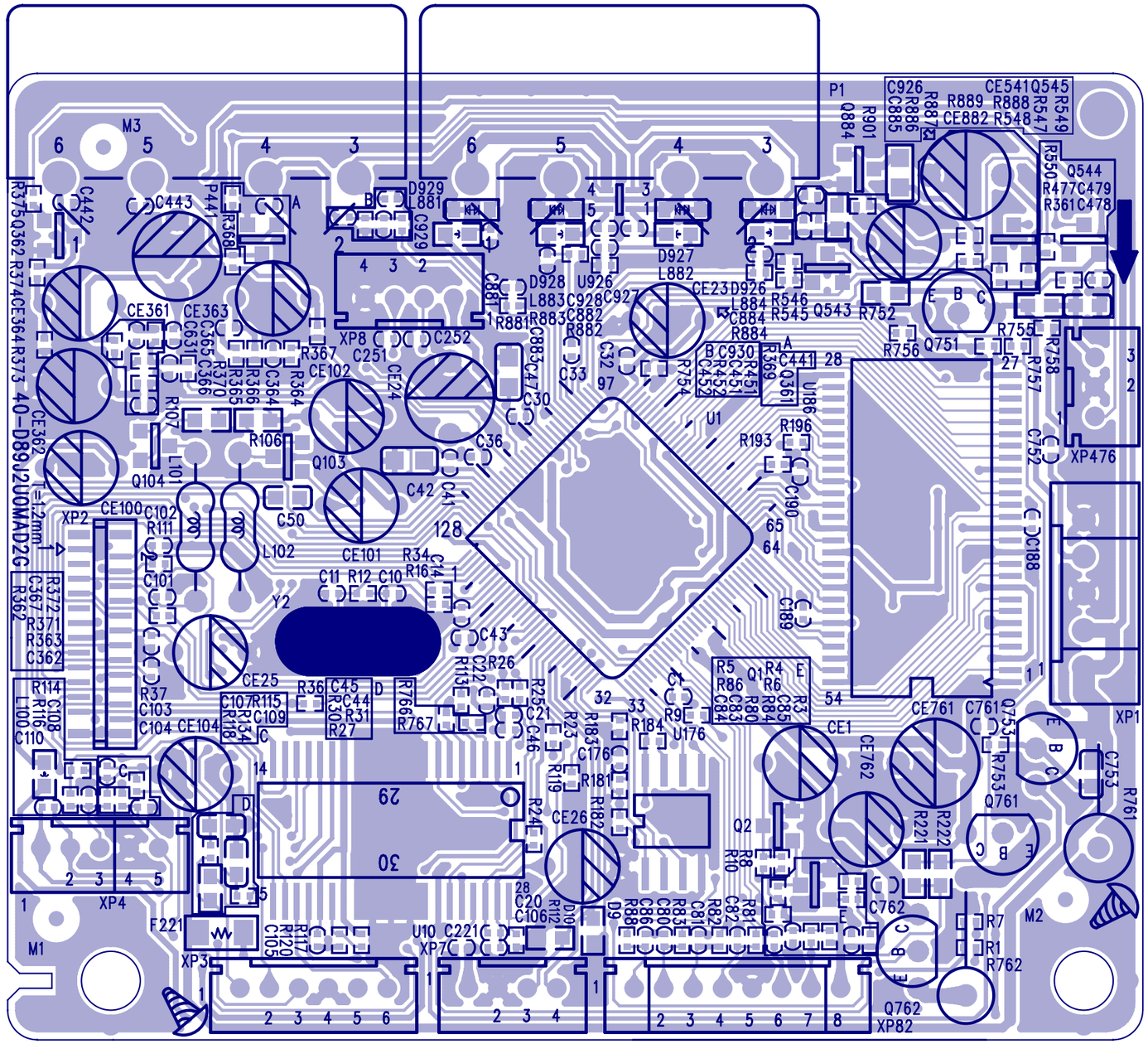
6-14

Power Supply Print-layout (bottom side):



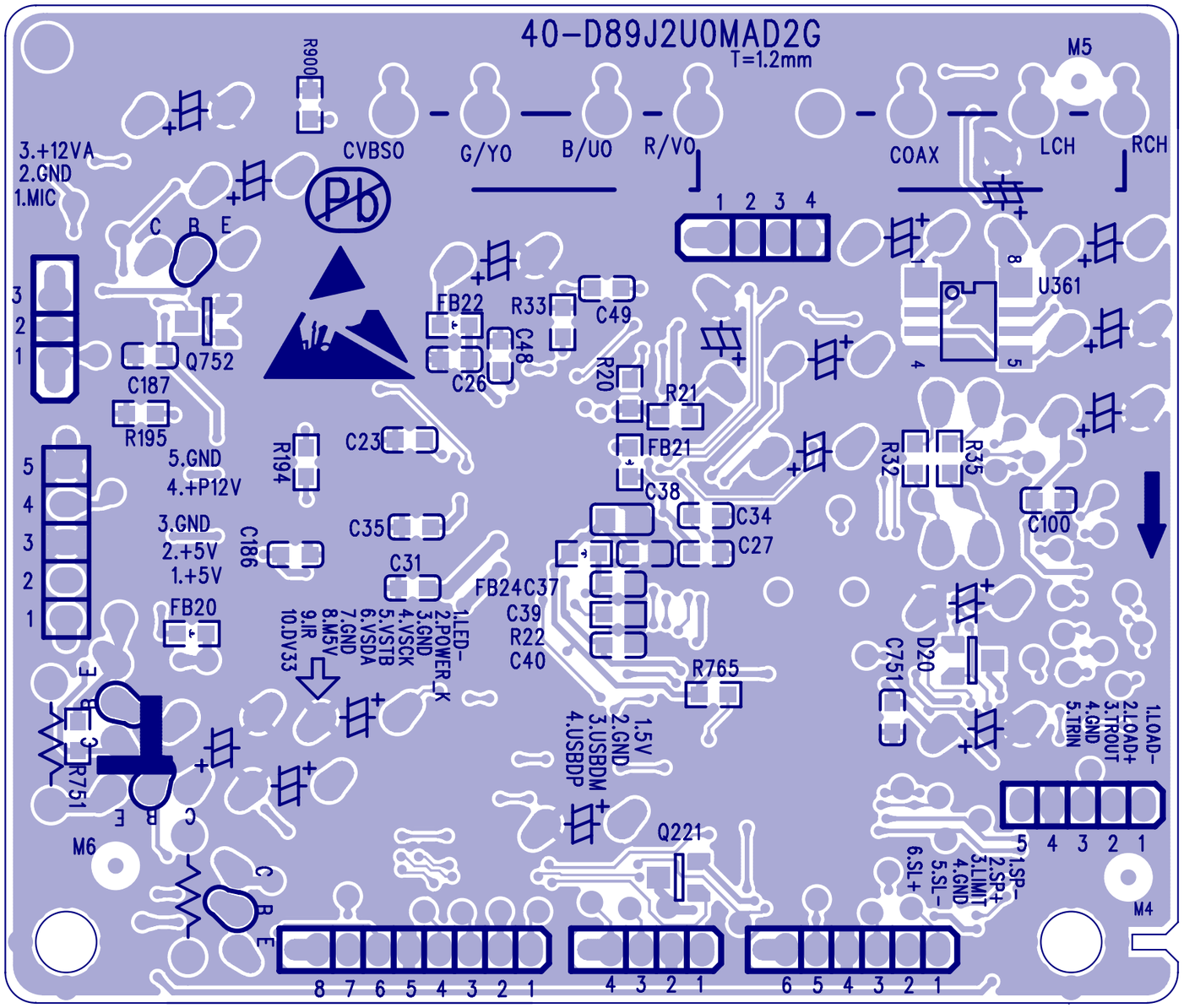
6-15

Main Board Print-layout (top side):

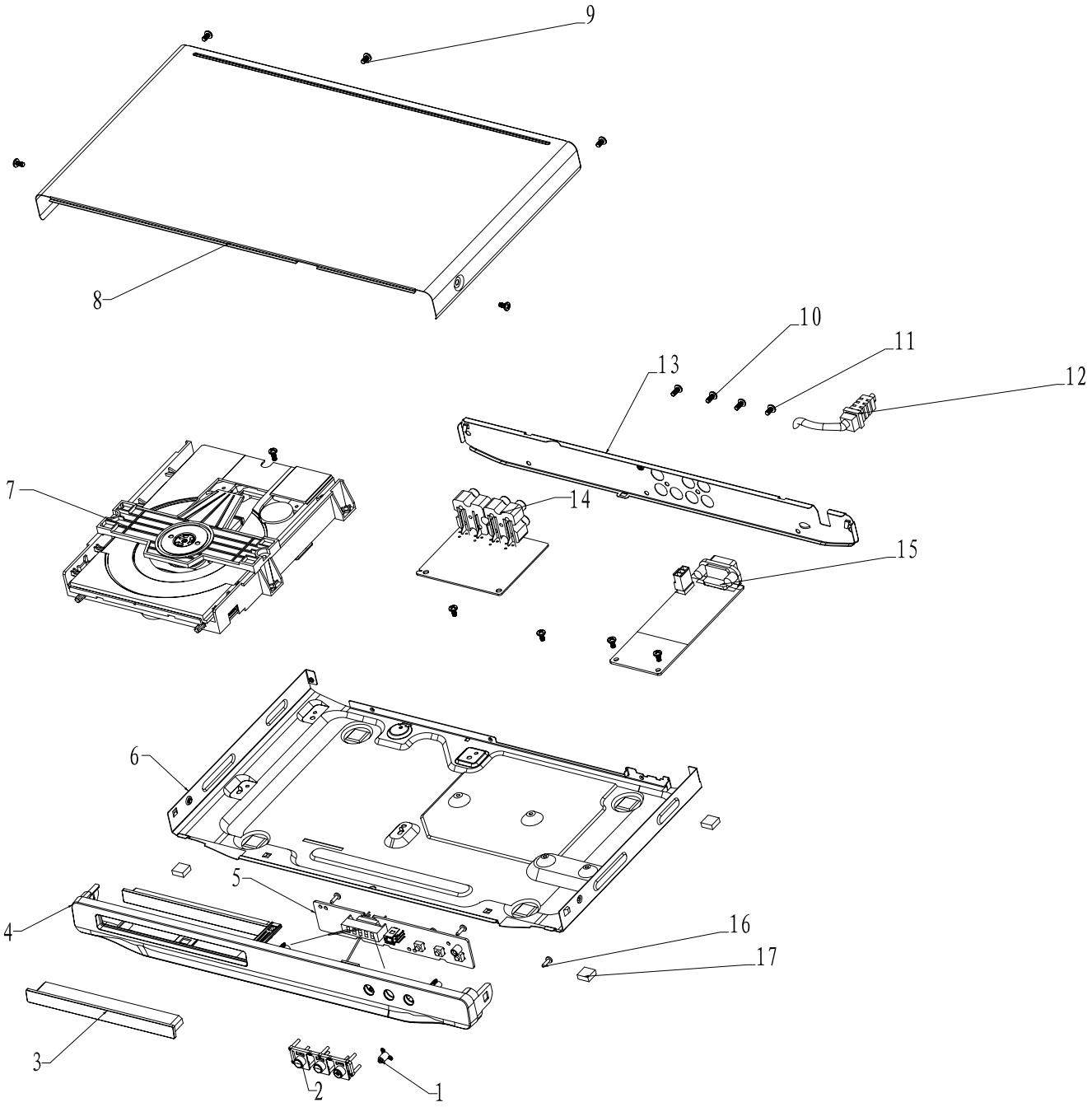


6-16

Main Board Print-layout (bottom side):

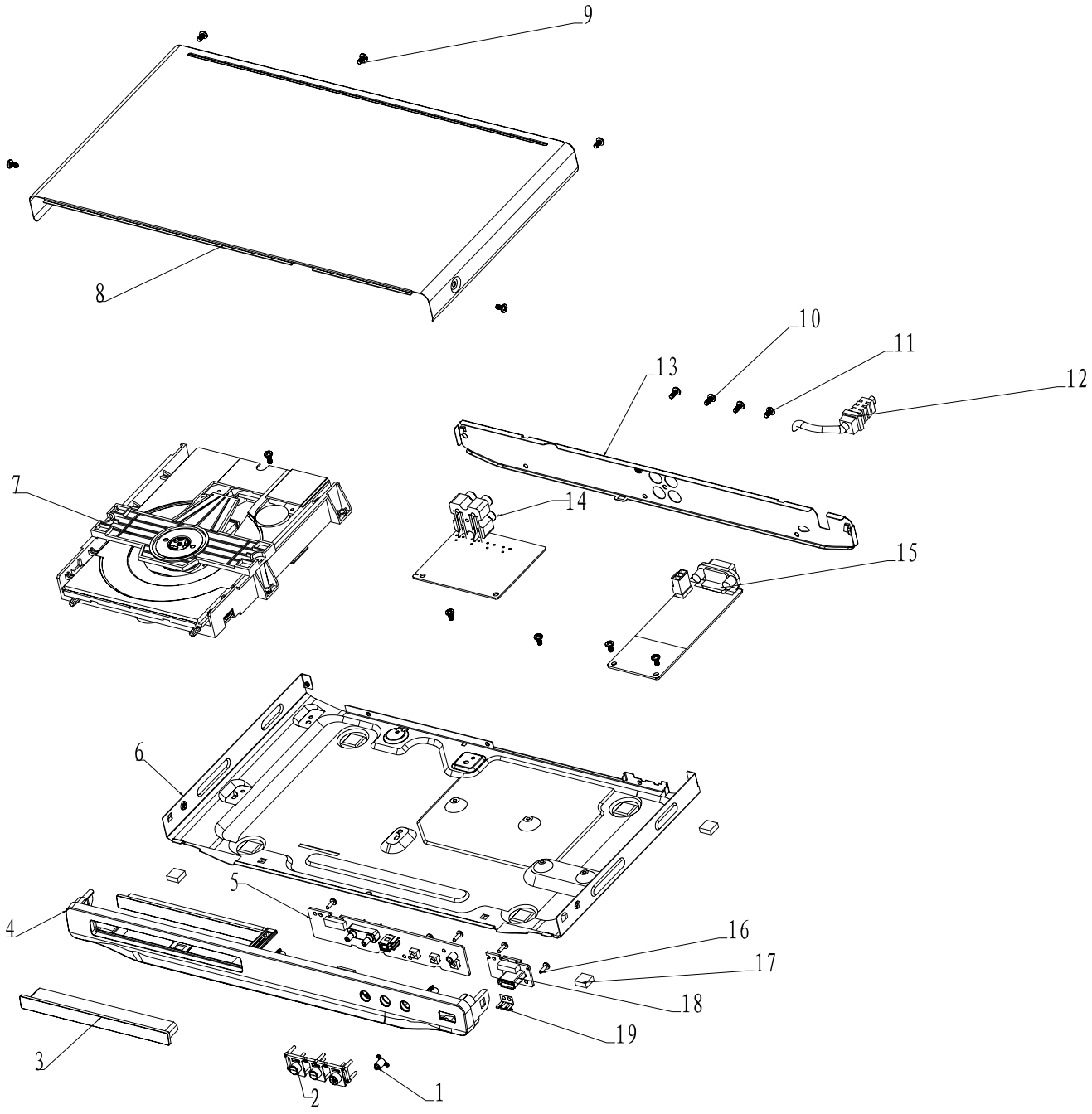


Exploded view for DVP3800(X)/55/96/98/79/77:



This is general mechanical exploded view for DVP3800/55/98.Please refer to the model set for the detailed information.
ASSY includes components:1,2,4.

Exploded view for DVP3800/93:



This is general mechanical exploded view for DVP3800/93.Please refer to the model set for the detailed information.

ASSY1 includes components :1,2,4.

Revision List

Version 1.0

* Initial Release for DVP3800/55.

Version 1.1

*Add DVP3800/96/98

Version 1.2

*Add DVP3800/93

Version 1.3

*Add DVP3800/79

Version 1.4

*Add DVP3800X/77